HUGHES

Article IV - 3A

DATA PACKAGE VOLUME IV - APPENDIX PART C - POWER SUPPLY DATA

PRESHIPMENT REVIEW

FLIGHT MODEL

CONTRACT NAS 5-24200

Greenbelt, Maryland 20771

Prepared for GOODARD SPACE FLIGHT CENTER

REMATIC MAPPER

PART C: Barbara Research Center) 365 p CSCL 14B G3/43 A 16/MF A 01

PRESHIPMENT REVIEW DATA PACKAGE. VOLUME 4: POWER SUPPLY DATA (Santa

MAPPER FLIGHT MODEL THEMATIC (E83-10267)

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HEMATIC MAPPER

Prepared for GOODARD SPACE FLIGHT CENTER Greenbalt, Maryland 20771 CUNTRACT MAS 5-24200

**SEPT 1982** 

FLIGHT MODEL
PRESHIPMENT REVIEW
DATA PACKAGE
VOLUME IV - APPENDIX
PART C - POWER SUPPLY DATA

Article IV - 3A



Hughes Ref No. 04596 •

Appendix C - Part I

Power Supply Performance Data Acceptance Data Summary

# SANTA BARBARA RESEARCH CENTER A Subsidiery of Mughes Aircraft Company

#### INTERNAL MEMORANDUM

TO J. L. Engel

cc. Distribution

DATE: 9 February 1982

REF: HS236-7833

SUBJECT Thematic Mapper Flight Model
Power Supply Acceptance Test Data

FROM: W. H. Freudenstei.

BLDG. B12 MAIL STA. 58

EXT. 6290 82-003

### Summary

The acceptance test data package for the flight model power supply was reviewed and the data compared to the relevant specification. The power supply was found to be within specification. The flight model power supply is suitable for integration into the flight Thematic Mapper system.

#### Output Voltage Regulation

The power supply output voltages for the primary and redundant supplies are tabulated in the appended data. The data ranges from a low temperature of 30°F to a high temperature of 131°F. The input voltage range is from 23V to 35V; 28V data is also included. Power supply regulation in general is good.

The appended data shows certain voltages outlined. These represent telemetry levels which exceed the allowable maximum voltage level, 5.1 volts. These exceedences occur only when the power supply output windings are open circuited. This does not create a problem for operation of the system and is the same as was encountered on the engineering and protoflight systems.

The telemetry output for the outgas system also appears out of range (too high). This occurs because the outgas winding of the power supply is not loaded, except in the outgas mode. The outgas voltage and its telemetry output will be within specification when the outgas winding is loaded.

### Output Voltage Ripple

Output voltage ripple was examined and found to be within specification.

To: J. L. Engel Date: 9 February 1982

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HS236-7633 page 2

### Efficiency

The power supply efficiencies are tabulated in the appended data pages. This data indicates that the power supply exceeds its minimum requirement for efficiency, 70%, under all operating conditions.

### Overvoltage Protection

The power supply is designed to "turn-off" in the event of overvoltage. The input bus may not exceed  $3d\pm2$  volts. An examination of the appended data indicates that the power supply meets this requirement.

### Undervoltage Protection

Drive to the power supply maxiswitcher and miniswitcher are removed when the input bus voltage grops below  $19\pm1$  volt. The power supply meets the requirement as indicated by the appended summary of test data.

#### Telemetry

The output voltage telemetry for open circuit and picture mode voltages are presented in the appended data. The SMA +7 volt, Radiometer logic, CDVU logic and outgas heater telemetry voltages exceed the 5.1V saturation voltage in the open circuit configuration. This same condition existed for the protoflight and engineering model supplies. This condition poses no problems for normal operation; during troubleshooting a certain amount of information would be lost.

### Impedances

The requirements for minimum impedance levels between returns were met in all cases.

### Turn-On Requirements

The power supply turn-on requirements were met in the following manner. The system was turned on into internal standby, approximately 42 watts, at a bus voltage of 23 volts and a temperature of -25°C. The system was allowed to warm up to 0°C at which time it was turned off and then back on into a full picture mode load. The flight model power supply (both primary and redundant sides) meets the requirement for turn-on.

To: J. L. Engel Date: 9 February 1982 CRICINAL PAGE IS OF POOR QUALITY

HS236-7833 page 3

### Input Current Limit

The input current protection circuit was adjusted and measured as a part of the flight model power supply acceptance testing. The set point is a function of input voltage and is tabulated in the appended data for both the primary and redundant supplies.

### Turn-On/Off Transients

The requirements for rate of change of current imposed on the input bus is a result of turn-on and turn-off of the power supply and was verified to be within the requirements imposed by the design specification.

### Conclusions

The power supply, both primary and redundant sides meets the requirements imposed upon it by the relevant specifications. It should be noted that the design specification needs to be updated to include a change, agreed upon in 1981 and incorporated into the test specification, to change the SMA  $\pm 29$  volt range to  $29.5 \pm 1.5$  vol

The flight model power supply is from a performance viewpoint, ready for system integration.

THE FRANCISCO

WHF: are atc.

### Distribution

Altman, L.
Benson, G. (El S)
Phillips, F. R.
Oxley, S. G.

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	-BAND 2+	23.78		19.98	3.635	23.25	4.248	20.31	3.70 3.68	
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	BAND 4+	2372		20.12	3.661	23.62		20 44	3.72	
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	BAND 5/7-	22.93		19.86	3.626		4.182	20.02	3.65	
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}	. BAND6-	23.09	4.206	20.04	3.664	23.11	4.210	20.36	3.72	
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	SMA +29	31.14	4.247	29.97	4.115		4.318	30.40	4.19	
	SMA -29	31.36_	3.958		3.898		3.767	20.42	3.95	
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	BAND Z+	24.32	4.424	20.36	3.707	29.03	4.380	20.55	3.750	
	BANO Z-	24.32	4.405	20.40	3.698	24.4B	4.428	20.5	3.728	
	BAND 3+	25.47	4.633	20.43	3. 7-18	24.51_	4.444	20.50	3,732	
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	SMA -29	31.50	3.839_	30,42		31.42	3.914	30.70	3.833	- ;
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	BAND 1-	24.33	4.429	1		24.15	4.395		3.780	
	BAND Z+	24.40	4.436	20.24		23.80			3.748	ļ
	BANO Z-		4.420		1				3.730	<u> </u>
1	BAND 3+	25.91	4.696	20,28		24.31		20.48	3.770	
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	BAN0 4+	24.75		20.42	1 '	24.63			3.773	
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	BAUO Z-	23.3.2		20.34	7.688	23.12	1 1 .	20.49	3.712	
Ì	_	23.82		20.41	3.714	23.14	4.209	20.42		
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	SMA +7	8.939	5.508	7.656	4881	9.031	5553	2.759	4.965	
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-:	BAND Z+		4.389	26.43	3719		4.299	20.57	3.757	-  -
	BANO 2-	1 -	' - '	20.46			4.35%	29.57	3.732	
	BAND 3+	25.39		26.51		1 . 4	4.390	2051	3.778	
	BAND 3-	23.37		20.45				20.60	3.758	
••••	B4N04+	1	1	20.55	3.734		4.385		3.769	
	8AND 4-		4.306	20.57	3.744				3.774	
	SUND 5/7+	23.20		25.27		2.8.63			3708	
	_BAND 577 -		4.216	f		23.45			3.688	
i	BAND 6+	3 .	4:135		3.701		4 220		3.726	
	BAND6-		4.264	1	3.737	1	4 300	22.46	3.760	!-
	SMAHTE +	24.66	4.500	22.72	,	25:16	4.596		4:158	<del></del> ;-
	SMAHTZ-	L	5.656	22.79	4.132	1 :	5.716	l' •	4.999	
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	SMA -29	36.69	3.920	1	1	21.1.	3.601	35.22	100 mm	
***	RAD. LOGIC	0109	5:200		4.709	9.721	5.268	3634. 8557	4.700	- :
	COVU	7.606	5.242			9.435			4.334	
	ANALIG +	1 '	4.747	, , , ,	4.014			22.53	4.031	
	ANALOG -	25.44			3.943		4.099	22.59	3.962	
	EUCTO	41.70	5.0%		4.069	4/60	5.095		L	
	OUTGAS	102.58	5.105		The second of the second of	· · · · · · · · · · · · · · · · · · ·	5.014	10-0	5.154	:
	PARASITIC	30.94	مين الميا	2 (170)	10.00	31.17	S.MLT_	190.01	1 2 1 2 Y	
· (	PHICASIFIC	130.71		<u> </u>	<u>.                                    </u>	21.1	· ;			<del></del>
	EFFICIEUCY	(SIEC.)	700	74	43%		74.8	4%		
	OUER VOLT.	3	38±2V)		BV	-	8.8V	4	1-1	- +
	: UNDERVOLT.	_	19±1V)	, .			18:041	7	1	
	- CAVEILUGEI.	(5,600.			18.9V		18.9V		<del>      -</del>	
	JUPOT QUESTION	(NON-S	DEC'1	· / / / - /	96Ams		7.20		:	
;	LIBIT	1 (/15/03)			1 WH WYS		سه بمواحق د ج	Part Pitting	••	··(\$
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FUGHT M	DOEL YOWER	SUPPLY OUTPO	175
B5.0 Va	T Roc. 78°	E TEMPERATURE	Aug 13217

_			·	· /	· ; ;	: :	<u> </u>		.   4	<u>!</u>
		Pou	LER SU	pply 1	•	PO	WER	SUPPLY	2	<del>-</del>
	OUTPUT	OPEN	TIMY	PICTORE	Thuy	OPEN	TIMY	PICTURE	Zmy	
		Cincuit	OUTPUT		OUTPOT	CIRCUIT		HID DE	DUTPOT	
		VOLTAGE	CHAITE	YOURGE		YOUTHE	(incres)	VOCTAGE	1 \	-
	ii	(VOUS)	(VOLTS)	10075)			(Vous)	(VO:25)	(VOUS)	<del> </del>
أ	BAUD 1+	23.98	4.37-2	20.53	3752	24.56	4.490	23.79	3812	
	BANO 1-	24.17	4.898	20.54		23.96		20.81	3.790	1
	BAND Z+	24.28	4.4/6_	20.34		23.67				1
į	BANO 2-	24.28	1 1	20.37	3.695			20.64	3.744	1 -
İ	BAND 3+	26.21	4.770	20.10		24.29		I : .!_	3,746	
!	BANO 3 -		4.240		3.7/6			20.63	3.765	
	BBNO 4+	1	4.466			24.46			3.735	
		ľ			3.727	24.09	4.381	ZABI	3.99	-
	- / /	23.31	4.253	20.08		23.83			3.344	_
	· · - /.•					23.60			3 676	ļ
. !		22.84				23.47				
		23.50		i .	3.706					
	SMAHTR +	1	9512	22.11	生04			22.41		
	SMAHTR-		4.528	22.62		25.44		22.92	*	_
			5,043	7.695	1	9.759		7.827	1 1 4	-
	SMA +29	31.73	4.328_	30.31	f	11		30.70	MT T	-
	SMA -29	32.05	3.671	30.30	3471	31.80	3.723		3.625	
	MUX			29.95	4.262				4.238	
	120.20916	9.53	5.1991	8.465	4.644	9.853	31	1	4673	1
· !	COVU	9.70	5.378	7.531	4.234	H				
	ANALOG +	26.88	4.779	2221	3.975	4		22.46	1	. _
. !	BNALOG-	24.42	4.470	22.29	3.915		4.839			_
	ELECTO.	45.29	5.544	32.97	4.050	47.76	5.480	33.46	4.11	<b> </b> -
	OUTGAS	10369	5.165	105.21	5.274	102.10	5.085	103.84	5.192	<b>.</b>
	PARASITIC	31.00						<u></u>		<u>i</u>
			. i <b>.</b> :	<u>.</u>		l			<del> </del>	- <b></b>
	EFFICIOUCY	(SPEC.)	. (		25%			15%	.	
	OUER VOCT.	, ~	38±2V)	,	<b>ラ</b> テ∨ ,		38.93	V	<u> </u>	· 
	UNDERWOLT.	(SPEC.	19±1V)	ON/OFF /	8.09V		18.08		·	
:		1	. \ 0	vertion 1			18.88		1	<u>.</u>
;	INPUT DIESEST	(NON-S	PEC'd)		9 Houps.	/:	2.699	Amos:		:{
	LIMIT		,					•	1	: (

	ORIGII	NAL PAGE	IIY	9	1			1 ;		<del> </del>
	F	LIGHT	MODE	L Poa	VER- S	UPPLY	DUTFU	75		<u> </u> 
		23.0	VOLT	Bus,+	131°F	TE MPE	EDTULE			-
_		Pou	IER SU	GOLY I		PO	WER	SUPPLY	2	
	OUTPUT	OPEN	TIMY	PICTORE	72my	OPEN	TLMY	MICTURE	ZMY.	
	_	CIRCUIT	_ OUTPUT	1 T	OUTPOT	CIRCUIT	OUTPUT.	MP DE	OUTPOT	
		VOLTAGE	(VOLTS)	VOCIAGE	/: <u> </u>	YOUTS)	MOUS	VOLTREE	(VOUS)	-
	7001	(Vous)		(1005)	(VOUTS)			(VOUS)		<del> </del>
-	BAND 1+	22.99	4.192	20.97	3.765	1 1	4.217	20.60	3.765	
	BAND I- BAND Z+	23.08	4.190	20.99	3.754 3.725	22.85	4:136	20.61	3.750 3.730	1-
	BAND Z-	25.22	4197	20.91	3.715	22.74	4.156	20.47	3.799	-
- 1	BAND 3+	23.84	4.330	21.02	3.748	23.01	4./84	20.42	3.718	-
į	BAND 3-	22.81	4.148	20.95	3,744	22.84		20.51	3.736	•
	BANC 4+	25.24	4.214	20.91	3730	23.04	4 129	20.59	3 744	
	BAND 4-	23.06	4. (83	25.94	3.749	22.94	4:162	20.61	3.746	
	BOND 5/7+	22.68	4.136	20.32	3.732	22.72	4.143	20'.14	3.16.89	
	BAND 5/7-	22.62	4.108	25.31	3.717	2244	4:113	20.17	3.673	_
	BAND 6+	22.51	4.067	20.50	3.723	22.5%	4 080	20.50	3.715	
- <b>-</b>	BAND6-	22.78	4:150	20.50	3.758	22.72	4.138	20.54	3.747	ļ. <b>.</b>
	-SMAHTR +	24.29	4.429	22.33	4.098	24.57	4.484	22.4)	4.103	_
	SMAHTR-	24.73	4.483	22 73	4.146	24.63	4.465	22.89	4:146	_
	SMA +7	9.106	5.613	7 688	4.919	9.189	5 656	7.730	4.965	-
	SMA +29	32.36	_ ~	30.54	4.190	32.74	4.490	30.50	4202	-
_ <b>_</b>	SMA -29	32.86	4.192	30.531	3.994	32.48	4.161	30.52	3.986	
•	MUX				4.316	000		30.20	4.277	
	RAD. LOGIC				4.802		Control of the last of the las	T	4.752	j
· —	COVU	1 '	5.196	1 -		1		7.768	1 -	-
	ANALOG +		3.964		3.973	n - ' '	4.799 2.991	22.57	2002	1-
	BNALOG -		4.677	1		38.03			4073	
	OUTGAS				5.176		5 066		5149	d
	PARASITIC	31.02	Y-ill-il	10.7:2.3	2.176	101.7.2	200	19.2.9.		1
<u></u>	HORSTE	1	<u> </u>		!		. i ·		:	<del>*</del> ~
	EFFICIENCY	(siee.)	70%	74	1.05%		7	4.39%		
	OUERVOLT.		38-2V)	_	.3V		38.	<b>5 \</b>		
	UNDERVOLT.	. ~	19±1V)	,			18.			<u>i</u> .
•				HE/ON 1			1/8.	90 V	1	<u></u>
	INPUT DELLEUT	(NON-S			963 Apres		. Zo.	90 Amp.	۶.	(
	. : UMIT				<b>-</b> ·····	• •				

<b>- 8:-</b> 1(0	COLUMN TO	A. Budiness and Children and the Period									
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€.			<del></del>	- PROP	OOR QUA			FIOUN	JUALITY		-+-
		1	UGHT	HODE	L Poa	VER S	UPPLY	DUTPI	 PTS		++
		-						-			
~			28.0	VOLT (	Bus, l	310F	TEMPER	CATURE			
				1			1	•		1 :	i
	!	_ [. ] ! :.	You	yer Su	0014 I		PO	WER	SUPPLY	2	
į		DUTPUT	OPEN	72my	PICTORE	Mary	OPEN	TLMY	PICTURE	ZMY	
			Circuit	OUTPUT		OUTPOT	1 .	COTPOT	HIS DE	OUTPOT.	
<b>!</b>			VOLTAGE	(VOLTS)	VOCIAGE	77 -25	YOUTHE	/. 1 - a - a - a - a - a - a - a - a - a -	VOLTOSE	(VOUTS)	
1		0.01	(Vous)		(10075)	(VOUS)			(vous)	<del></del>	
<del>.</del>	-	BAND 1+		4 269	20.65	3.772		4.369	I	2.793	
•	·	T	23.54		20.66	3.361		4.25%		3.775	
		BAND 2+		4.357 4.333	20.44	7.724	23.73	4.240		3.725	
	٠	T. T.	23.95	4.603		3.742				3.773	
		BAND 3-		4.223	20.49	7.737	23.46	_	20.50		-
			23.89	4.737		2.343		4328	1	1 7 1	2 - <del>1 -</del>
			23.54			7.753				3.770	1
		BOND 5/2+	23.12	4.215	20.35		23.40			3.710	
		_BENO 5/7-		4.198	20.34	2.703		4.230		3.688	1 :
٠			2.2.79		20.53	3.714	23.11	4180	20.58	3.726	1
	:	Bandb-	23.30	4.249	20.53	3.750	23.36	4.259	25.60	3.761	
	- \	SAITH +	24.51	4.472		4 689	25.24		22.43	4.114	
	~	SMAHTE-	25.33		22.84					4.160_	:
		1 -		5.687	7.708	4.927			7.780		
•		SMA +29	32.39	4417	30.50		32.72				
		: .	32.84	4036		1	B . !	4.027		3.852	
		MUX	07/0	-2021			2013	-200		4.298	
	÷ <u> </u>	RAD. LOGIC				4.782	и,	2 - A - A - A - A - A - A - A - A - A -	1		
		· · · · · · · · · · · · · · · · · · ·	1	5.293	1		R .		1	4365	
•		ANALOG -		4.805	l .	3.957		•	1	3.950	- <del></del>
				5.077	1	3	4.22	4		4092	
				5:175						5.220	
		PARASITIC		المحتبا المتحكم	10 3: 1.0	R. B. I.	10.6.63	8411	المالا المالية		
	. • •	1	-				;	: :	<del></del>		
	~	EFFICIENCY	(SIEC.)	70%	73.	91%		74.	21%		
	•	OUEL VOLT.	6	38±2V)		25.7		38.8			
		UNDERVOLT.		19±1V)				18.08			
	-			_	FFON 1	_ •		18.88			: ::::
		INPT QUELLIT	(NON-5	pec'd	NA	•	1	6. 86 J	How	\$	(B)
		LIMIT						: 	<b>_</b>	- · · · · ·	

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	ORIGINAL PAGE	LITY	_   .		!			: ! !	1 ! . !	
				0						
_	<i>F</i>	21647	MODE	L Poa	JER J	UPPLY	DUTPO	75 _		
-		250	1/2-	Bus , t.	1210=	1	ACTUAT			
. 1		<u>, 0</u>	7061	005 1			car one			
		Pou	jën Su	18914 I		PO	WER	SUPPLY	2	
!	DUTPUT	OPEN	72MY		Bruy	OPEN	TLMY	PICTURE	ZMY	
		Circuit	OUTPUT		OUTPOT		OOTPUT.	HUDG.	OUTFOT	
-		VOLTAGE (VOLTS)	(YOLTS)	VOCAGE (1905)	(vous)	YOUTS)	(vous)	VOUTS >	(VOUTS)	
	BAND 1+	23.70	4.325	20.62	3.766	24.37		20.81	3.811	
İ	BAND 1-	23.89	4.746	20.63	3.355			20.83	3.790	<del>-</del>
	BAND Z+	24.11	4.389	20.45		23.53	•	20.67	2772	1
;	BANO Z-	24.11	4365	20.48	3.7/0	24.11	4.365	20.69	3.748	
	BAND 3+	24.71	4.772	20.53	1 1	24.18	-	20.60	3.754	
,	BAND 3-	23.16	4.216	20.48		23.82	_ : : :	20.69	3.771	
	BAND 4+	24.33	4.4/8	20.59		24.30		20.01	3.785	
	BOND 4-	23.84	4.333	20.62	3.749	23.95	4.351	20.82	3.782	
	BOND 5/7+	23.22	4.236	20.20		23.74	4.343	20.20	2.713	· · ·
	BA110 577 -	23.16	4.218	20.19		23.50		1	3.68/	:
	_ BEND 6+	1	4:118	20.40	3.690	' 1	4.228			:
	BANDO-	23.41	4.273	20.41	3.725	23.70		20.59	3.760	
	-SELAHTZ +		4.479	22.23	4.059	25.60		22.44		:
	SMAHTE-	1	4636	7	4.118	R		27.95	4./61	<del></del>
	SMA +7		5.945	7.71_	4.928	11	6.605	(5/10/10/10/10/10/10/10/10/10/10/10/10/10/	5.02	
	SMA +29	32.77			4.166	,,	7.493	35.70	4.230	<del>-</del>
	SMA -29	37.84	3.070	30.39	3.517 4.269	32.60	2.071	30.25	4.283	
	MUX RAD. LOGIC	0898	5.327		4.731	10.10	F436	8.634		†
!	COVU	1	5.442	1	4.292			3.76		: :
	AUALOG +	<b>I</b> .	3		3.995			1	4.023	
•	ANALOG-		4.503	1	3.930	E I			3.949	: 1
		45.06		3207				33.43		
	OUTGA-S	L	5.248	106.95	5.348			105.24		
	PARASITIC	31.23				32.01	:			
			: .				<u> </u>			
	EFFICIEUCY	(SIEC.)	70%	72	45%		_72.			<u> </u>
	OUER VOLT.	, -	38±=v()		1.25V		38.8		- ! ! -	<u>:</u> : :
:	UNCERVOLT.	(SPEC.		with 1			18.06			<u> </u>
	. ^ ^	١, -	. , , 0	44/9N /		13 : :	10.89			<u>:</u> .
į	INPUT QUELENT	(Vicin-2	fec'd)	12.5	72/1000		13.2	34 Apr	75.	9
•	LIMIT	l		•						

5. No. 1

Appendix C - Part 2

Power Supply Performance Data

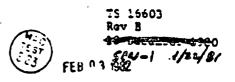
Short Form Test Data

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TS 16603 Rev B 18 December 1980

. 10.4 <u>P</u>	'erformance tes	t - Long	Form		TEST SZ	FEB 1. 3 1982	
PROTOFLIGHT	NA .	R FLICHT	V	<i>.</i> .	s/n 004	TEMPERATURE	. 32°F
IN-PROCESS	14.4	TUAL	MA		OR ACCEPTANCE		•
	E HUAL COLD	· /	tem.	 L1	NE VOLTAGE:	23.0	VOLTS
				<del></del>			
REF. PARA.	DESCRIPTION	₹	DVH SW.		LIMITS	Measur Primary	ement Redundant
· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·			,	. /	
5.10.1.1	Calibrate cmd					A 223	1 220
5.10.2.1	Input bus cur	rent	\$26-1, (\$27-4 recurs	for	7	0.227m	23Qm
5.10.2.2	MOX output vo	oltage	S26-3,	S27-1	30.0 ±0.90V	29.32V	29.911
5.10.2.3	MIX load curr	_	_	S27-12	_	3.242A	32.42 A
The rest of	Section 5.10.2	) -acutra	s only	aha elet ne	moleana - in		olementes.
	J. 20, 1		o obly (	-He-want		ircate by the	CRIMET RY
5.10.2.4.1	BI + output v	oltage	S26-1,	S27-5	• •		Carrot
5.10.2.4.2	B1 -		1	\$27 <b>-</b> 6 ···			
5.10.2.4.3	B1 -	•	•	<b>527-5</b>			1
5.10.2.4.4	B1 +		1	S27-7			
5.10.2.5.1	B2 +		1	S27-7			E-MAN
5.10.2.5.2	B2 -			\$27÷8			
5.10.2.5.3	B2 -			<b>\$27-8</b>			
5.10.2.5.4	B2 +			S27-7			
5.10.2.6.1	B3 +			S279			
5.10.2.6.2	B3 -		- 1	S27-10		V	
5.10.2.6.3	B3 -			S27-10			
5.10.2.6.4	33 +		1	S27-9			
5.10.2.7.1	84 +			S27-11		V	<u>i/</u>
5.10.2.7.2	B4 -			S27-12	•	V	
5.10.2.7.3	84 -		<b>₩</b>	S27-12		V	
5.10.2.7.4	B4 +		S26-1,	S27-11		V	
5.10.2.8.1	B5,7÷		S2b-2,	<b>S27-1</b>		<u> </u>	
5.10.2.3.2	B5,7-		1	527-2		V	1
5.10.2.8.3	B5,7-			<b>\$27-2</b>		V	
5.10.2.8.4	B5,7÷			s27-1			
5.10.2.9.1	E6 +		J	S27-3		V	
5.10.2.9.2	B6 - output v	oltage	S26-2,	S27-4	SEVIEW	C V	<u> </u>
			•		المراجع والمراجع	ر کی	
			-66-	-	- 4"	くぎ	$\checkmark$



### Performance test (continued)

PET. PARA.	DESCRIPTION	DVM SWITCH POS TILONS	MASURPHE:
5.10.2.9.3	B6 output voltage	£25-2, <b>\$27-</b> 4	
5.10.2.9.4	86 → DECPUE VOLTEGE	.S26-2, S27-3	
5.10.2.10.1	. SMA EIR + output volt	age   S27-5	
· 5.10.2.10.2	• 1	<b>\$27-6</b>	V
5.10.2.10.3	•	527 <del>-6</del>	· V
5.10.2.10.4		♥ S27-5	
5.10.1.11.1	-7 <b>V</b>	\$25-2, \$27-7	<u> </u>
5.10.2.11.2	. π÷	(SI7-8 for EDT)	
3.10.2.12.1	-297	\$26-2, \$27-9	V
		(\$27-11 for EDT)	
5.19.2.12.2	-29∇	526-2, 527-10	
		(\$27-12 for EDT)	
5.10.2.12.3	-29♥	\$25-2, \$27-10	<u>l</u>
5.10.2.12.4	5MA ETT -29V	\$26-2, 527 <del>-9</del>	<u>~</u> ~
5.10.2.13.1	Radiomoter	\$26-3, \$27-2	
5.:2.:.:3.:3	Radimeter	\$27 <b>-2</b>	
5.10.2.14.1		S27-3	
3.10.0.14.0	COVI COVI	527-3	
5.10.2.15.1	Anslog +	527-4	
5.10.2.15.2	Abalog -	527-5	
5.10.2.15.3	Amalog	527-5	
5.10.2.15.4	Analog +	S27-4	
5.10.2.16.1	. Flectromech.	s27-6	<u> </u>
5.10.2.16.2	Electromech.	527-6	
5.10.2.17.1	Outges output volta	sge \$26-3, \$27-7	
5.10.3.1	Bus voltage	526-1, 527-1	
		(\$27-3 for RDT)	2 <u>3.03</u> (49)23.02
5.10.3.2	MIX load current	\$26-3, \$27-12	4.130 -0.3254 41.41 @16 2015
5.10.3.3	Bus current	<b>\$26-1, \$27-2</b>	mu ~ 41.13
•		(S27-4 for RDT)	152.48(50)[55.1]
5.10.3.3.1	3PS Voltage	526-1, 527-1 527-3)	28.02 23.02
5.10.3.3.3	BPS Current	\$26-1, 327-2 (\$27-4)	152.18 155.94
5.10.3.3.4	MUX Current	_526-3; 527-12	41.30 -31.43
		<b>-67-</b>	2

# 10.4 Performance test (continued)

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1 -0-1
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FLU "3 1982

		DVM SWITCH		HEASUREMENT
REF. PARA.	DESCRIPTION	POSITIONS	LIMITS	PRIMARY REDUNDA
5.10.3.4.1	El + output voltage	\$26-1, \$27-5	20.50 ±2.50v	20.15 (1) 20.4
5.10.3.4.2	Bl + output ripple	Lock on Scope	≪600 mV pk-pk	20 30
5.10.3.4.3	B1 - output voltage	\$26-1, \$27-6	-20.50 <u>+</u> 2.50V	-30.16 (2) 3041
5.10.3.4.4	Bl - output ripple	Look on Scope	≪600 mV pk-pk	20 30
5.10.3.5.1	B2 + output voltage	S26-1, S27-7	20.50 ±2.50V	/LIB (3) ZO.2"
5.10.3.5.2	B2 + output ripple	Look on Scope	≪600 mV pk-pk	<u> 30 20</u>
5.10.3.5.3	B2 - output voltage	S26-1, S27-8	-20.50 ±2.50V	-20.02-(4)-20.3
5.10.3.5.4	B2 - output ripple	Seen on Scope	<600 mV pk-pk	20 " 20
5.10.3.6.1	B3 + output voltage	\$26-1, \$27-9	20.50 ±2.50v	2e.07 (5) 20e3
5.10.3.6.2	B3 + output ripple	Seen on Scope	<500 mV pk-pk	20 20
5.10.3.6.3	B3 - output voltage	S26-1, S27-10	-20.50 <u>+</u> 2.50v	-20.03 (6) 30.3
5.10.3.6.4	B3 - output ripple	Sean on Scope	<600 mV pk-pk	30 20
5.10.3.7.1	B4 + output voltage	S26-1, S27-11	20.50 ±2.50V	2012 (7) 2014
5.10.3.7.2	B4 + output ripple	Seen on Scope	<600 mV pk-pk	20 20
.10.3.7.3	B4 - output voltage	S26-1, S27-12	-20.50 <u>+</u> 2.50v	- 5774 (815 TIR
5.10.3.7.4	B4 - output ripple	Seen on Scope	≪600 mV pk-pk	20 20
5.10.3.8.1	B5,7 + voltage	S26-2, S27-1	20.50 ±2.50V	19.86 (9) 20.0
5.10.3.8.2	B5,7 + ripple	Seen on Scope	≪600 mV pk-pk	
5.10.3.8.3	B5,7 - voltage	S26-3, S27-2	-20.50 ±2.50V	-19.84.(6)20.0:
5.10.3.8.4	B5,7 - ripple	Seen on Scope .	≪500 mV pk-pk	20 40
5.10.3.9.1	B6 + voltage	\$26-2, \$27-3	20.50 ±2.50V	20.03 (11) 20.34
5.10.3.9.2	B6 + ripple	Seen on Scope	≪600 EV pl -pk	20 20
5.10.3.9.3	B6 - voltage	\$26-2, \$27-4	-20.50 ±2.50V	-20.04 1125 20.30
5.10.3.9.4	B6 - ripple	Seen on Scope	≪600 mV pk-pk	<u>20 20</u>
5.10.3.10.1	SMA Htr + voltage	\$26-2, \$27 <b>-</b> 5	21.20 ±2.12V	21.8 F (13) ZZIZ
5.10.3.10.2	SMA Rtr + ripple	Seen on Scope	<630 mV pk-pk	20 30
5.10.3.10.3	SMA Htr - voltage	\$26-2, \$27-6	-21.20 ±2.12 V	-22:32 (17)22:65
5.10.3.10.4	SMA Her - ripple	Seen on Scope	≪630 mV pk-pk	20 20
5.10.3.11.1	SMA +7V 🕏 voltage	S26-2, S27-7 (S27-8 for RDT)	7.10 ±0.80V	7.558 (15) 7.71
5.10.3.11.2	SMA +77 output ripple	Seen on Scope	≪10 av fk-pk	25 40

### 10.4 Performance test (continued)

ryf Para	prscription_		DE SUITOR	LEGIS	
5.10.3.12.1	SM +29V output	voltege	\$25-2, \$27-9 (\$27-11 fer EDT)	29.50 ±1.56V	24.97 (m) 10.40
5.10.3.12.2	SMA +29∀	ripple	Seem on Scope	≪370 aV, pk-pk	30 40
5.10.3.12.3	574A -29V	so i tuge	\$25-2, \$27-10 (\$27-12 for IDT)	-29.50 41.507	-2 <u>9.96 (82)-38.</u> 42
5.10.3.12.4	SMA -29V	rippla	Sees on Scope	4370 est pic-pic	30 40
5.10.3.13.1	MUZ	voltage	<b>526-3</b> , <b>527-1</b>	30.00 to.907	29.30 (3) 50.10
5.10.3.13.2	HUX	ripple	Soca oa Scope	<b>€00 a. 9k-9k</b>	445
5.10.3.14.1	Radicmeter	voltage	\$2 <del>6-</del> 3, \$27-2	8.50 ±0.857	8.303 (2) 8.39
5.10.3.14.2	Redicanter	ripple	Sees ca Scope	Q50 of pi-pi	30
5.10.3.15.1	ದಾಳರ	voltage	<b>526-3, 527-3</b>	8.00 <u>+</u> 0.807	7.519 90 7.66
5.10.3.15.2	<b>ट्रा</b> पण	ripple	Sees os Scope	Q40 et pi-72	LA JA
5.10.3.16.1	Analog +	voltage	\$26-3, \$27 <b>-</b> 4	21.20 ±2.127	22.06 2022.39
5.10.3.16.2	Asslog +	rippla	Sees es Scops	dio m ph-ph	25 30
r 10.3.16.3	- golson	voltage	\$2 <del>6-</del> 3, \$27-5	-21.20 ±2.127 -	22.13 day 22.42
.0.3.16.4	Analog -	ripple	Secio es Scope	र्युष्ट्रं क्षेत्र १६०	20 50
5.10.3.17.1	Electromech.	voltage	\$25-3, \$ <b>27-</b> 6	33.40 ±3.347 £	2.53 ed 22.10
5.10.3.17.2	Electromech.	ripple	Sees ca Seepa	Q. S pk-pk	20 40
5.10.3.18.1	Onsgae 🛕	voltagė	526-3, 527-7	160.0 ±12.67	100.90 100.78
3.10.3.18.2	Cargas output	ripple	Sees es Seeve	O.07 pk-pk	Bev Man
5.10.4.1	Imput current t	elemetry	526-4, S28-1 (S28-4 for WT)		4.652 4.62
5.10.4.2.1	Band 1 + wolt.	telemery	52 <del>5-</del> 4, 528-5		3.647 3.74
5.10.4.2.2	Band 1 -		\$28-6		3.675 3.72
5.10.4.3.1	Bend 2+		\$28-7		3.646 3.70
5.10.4.3.2	Read 2-		\$28 <b>-</b> 8		3.635 3.68
5.10.4.4.1	Band 3+		\$28 <b>-9</b>		3.660 3.69
5.10.4.4.2	Band 3-		S28-10		3.660 ETL
5.10.4.5.1	Band 4+		\$28-11		3.661 3.72
5.10.4.5.2	Band 4-		526-4, 528-12		5.672 3.72
5.10.4.6.1	Band 5,7+	,	\$26-5, <b>\$28-1</b>		3.642 3.66
5.10.4.6.2	Band 5,7- voit.	telemetry	s26-5, s28-2		3.6 <u>26</u> 3.65

TS 16603 Rev B 18 December 1980

# 10.4 Performance test (continued)

FEB 0 3 1982

			LEB 11.2 1205	•	
KEF. PARA.	DESCRIPTION	DVM SWITCH POSITIONS	LMITS	Heas Primary	UREMENT REDUNDA
5.10.4.7.1	Band 6 + volt. telemtry	s26-5, s28-3		3.634	34
5.10.4.7.2	Band 6 -	S2E-4	•	364	372
5.10.4.8.1	SMA Htr +	\$28-5		4.002	Ma
5.10.4.8.2	SMA Htr -	S28-6		4.052	Lill
5.10.4.9	SMA +7V	\$26-5, \$27-7 (\$27-8 for PDT)	•	4.911	11.92
5.10.4.10.1	SMA +29V	S26-5, S28-9 (S27-11 for RDT)	• • • •	4.115	4619
5.10.4.10.2	SNA -29V	S26-5, S28-10 (S27-12 for RDT)		3.898	19
5.10.4.11	MUX	S26-6, S28-1		4.224	426
5.10.4.12	Radiometer	\$26-6, \$28-2	a seed of the	4.538	del
5.10.4.13	CDVU	S26-6, S28-3	•	4.222	æize
5.10.4.14.1	Analog + volt. telestry	\$26-6, \$28-4		3.946	3.99
5.10.4.14.2	Anelog -	526-6, S28-5		3.190	<i>9.</i> Q.
.10.4.15	Electromech.	\$28 <b>-6</b>	1000 · ·	4.002	4401
.10.4.16	Outgas volt. telemetry	\$26-6, \$28 <b>-7</b>		5.047	Sil
5.10.5.1.1	Analog + load current	\$26-3, \$27-11 mV	: 10 = Amps	15.42Z	64) LSLG
5.10.5.1.2	MUX	S26-3, S27-12 mV	÷ 10 = Amps	4151	(25) LIE
5.10.5.1.3	Band 1 +	\$26-7, \$34-1 mV	÷ 0.5 = mA	8273	no 360
5.10.5.1.4	Band 1 -	S34-2	1	- 89.91	77) 91.22
5.10.5.1.5	2 +	s34-3	<b>.</b>		pos dil
5.10.5.1.6	2 -	s34-4	1	- 89.69	21, 20.2
5.10.5.1.7	3 +	S34-5		89.53	20) 90:
5.10.5.1.8	3 -	s34-6		- 89.43 (	1) 906
5.10.5.1.9	4 +	s34-7	~	89.64	(22) 91.0
5.10.5.1.10	4 -	S34-8		- 89.36	73 92.65
5.10.5.1.11	5,7 +	S34-9		89.50	(24) 2010
5.10.5.1.12	5,7 -	S34-10		一 88.71	13 99.3
5.10.5.1.13	6 +	\$ \$34-11	Ţ	46.63	004123
5.10.5.1.14	Band 6 -	S26-7, S34-12	1	- 4 <u>6.4</u> 9.	57)47.2
5.10.5.1.15		S26-8, S34-1 mV	÷ 0.5 = mA	43.70	00) 47.9
3,10.5.1,16	SMA Her - load current	S26-8, S34-2 mV	= mA	- 8.832	60) S. 9



### TS 16603 Rev B

SEN-2 7-6-81 SEN-3 4/3/81

# 10.4 Performance test (continued)

		DVH SWITCH FE	B 0 3 1982	Mark Cittlemann
REF. PARA.	DESCRIPTION	POSITIONS	LDAITS	MEASURITEM. PRIMARY REDUN
5.10.5.1.17	SMA +29V load current	S26-8, S34-3 m	V ÷ 0.402 = mA	4992(4) 50
5.10.5.1.18	SMA -29V	S34-4 E	V ÷ 0.402 = ∞A	-4914669 811
5.10.5.1.19	SMA +7V	S34-5	V ÷ 0.1 ⊂ Amps	23-5 (4) 25
5.10.5.1.20	Analog -	S34-6 201	V ÷ 0.402 = EA	- 265.2 (40.26
5.10.5.1.21	Radiometer	S34-9 m	V ÷ 0.5 = 12A	14900 (4) 150
5.10.5.1.22	CDA10 -4	<b>♦</b> 534-10 <b>≥</b>	V + 0.5 = mA	26 <u>9.4</u> @527
5.10.5.1.23	Electromech, load current	\$26-8, \$34-11 m	7 ÷ 0.402 = mA	207.3 (4)21.
5.10.5.2.1	Bus power supply voltage	S26-1, S27-1 (S27-3 for RDT)		23.05 pm23.
5.10.5.2.2	Bus input current	S26-1, S27-2 EST (S27-4 for RDT)	7 ÷ 10 ≈ Azeps	153.16 (48)156
5.10.5.2.3	PIN (Section 5.10.5)			853.053 360
5.10.5.2.4	P <sub>IN</sub> (Section 5.10.3)			95 <u>1.161</u> 357
5.10.5.2.5	PIN (8vg)			35 <u>7.678</u> 35 <u>77.1</u>
5.10.5.2.9	Input current at current	limit	26-1, 27-2 (26-1 27-4 Rd)	139.6 LM
	Input voltage at current	limit	27-1 (27-3 Rd)	e) 2 <u>3.08</u> 22.
	MUN voltage at current li	mit	26-3, 27-1	2773 27
	MUX current at current li	mit	27-12-	51.32 sa
5.10.5.3.1	Pour			245. 57/ 27/1
5.10.5.3.2	Efficiency		> 70%	15.92% 7



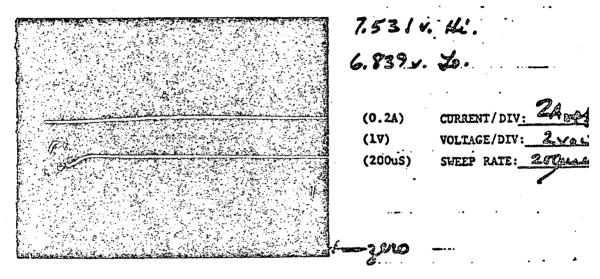
TS 16603 Rev B 18 December 1980

### 10.4 Performance test (continued)

FEB 0 3 1982

		DVM SWITCH		MEASUREMENT	
REF. PARA.	DESCRIPTION	POSITIONS	LIMITS	PRIMARY	REDUNE
5.10.6.1	+7V output pulsed	S26-2, S27-7 (S27-8 for RDT)	7.10 ±0.80V	6.839	كىلا
	Maria de la compansa de				-

5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V output is being pulse-loaded-PRIMARY SIDE



5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as pulse-load on SMA +7V outputs is being removed - PRIMARY SIDE

<b>.</b>	• ===.
(0.2A) (1V) (200uS)	CURRENT/DIV:A  VOLTAGE/DIV:A  SWEEP RATE:
-zrof	on Butto



TS 16603 Rev B 18 December 1980

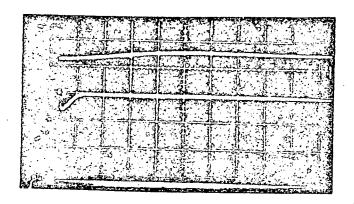
FEB n 3 1982

10.4 Performance test (continued)

REF. PARA

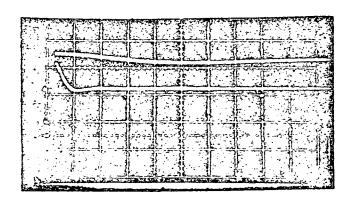
DESCRIPTION

5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V output is being pulse-loaded-REDUNDANT SIDE



(0.2A) CURRENT/DIV: 2 A A.C
(1V) VOLTAGE/DIV: 2 V
(200us) SWEEP RATE: 2661105

5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as pulse-load is being removed-REDUNDANT SIDE



(0.2A) CURRENT/DIV: 2 A.C
(1V) VOLTAGE/DIV: 2 U
(200us) SWEEP RATE: 200

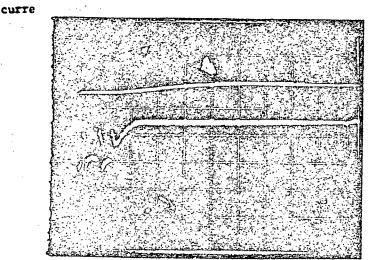


TS 16603 Rev B 7-6-81

# 10.4 Performance test (continued)

FEB n 3 1982

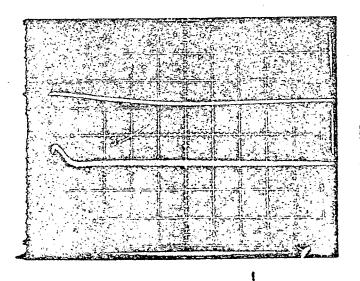
		BOM SWITCH		MAS	UZEMEN.
REF. PARA	DESCRIPTION	POSITIONS	LIMITS	PRIMARY	REDUR
5.10.6.3	Input bus current	\$26-1, \$27-2		156.07	162
5.10.6.4	SMA +7V TM- pulsed	(\$27-4 for RDT) \$26-5, \$28-7	•	4.417	4,6
5.10.6.5	SMA +7V load current-	(S28-8 for RDT) (S26-8, S34-5		·458. <u>6</u>	471
5.10.6 6	pulsed Photograph of transients	induced on input bus	current IDE	and SMA +7V loa	ad



7(1A) \* SMA CURRENT/DIV: (NA) BUS CURRENT/DIV: (200uS) SWEEP RATE: 200 \* Using O.1\_sehunt and

100 mV/Div on scope

Photograph of transients induced on input bus current and SMA +7V load 5.10.6.6 current as pulse-load is being removed-PRIMARY SIDE



(1A) SMA CURRENT/DIV: BUS CURRENT/DIV: / Acade (NA) (200as) SWEEP RATE:

tusing 0.1 \_\_ shunt and 100mV/Div on Scope



TS 16603 Rev B

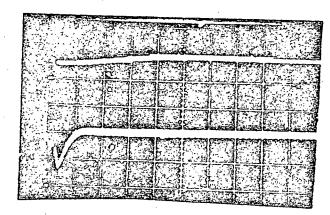
10.4 Performance test (continued)

FEB # 3 1982

REP. PARA

DESCRIPTION

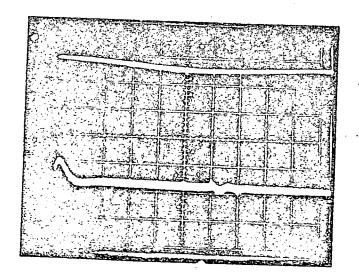
5.10.6.6 Photograph of transients induced on input bus current and SMA + 7V load current as SMA + 7V output is being pulse loaded - REDUNDANT SIDE



(1A)\* SMA CURRENT/DIV: 166 M (2A) BUS CURRENT/DIV: 28 (200us) SWEEP RATE: 260

\*Using 0.1 -shunt and 100 mV/Div on scope.

5.10.6.6 Photograph of transients induced on input bus current and SMA + 7V load current as pulse-load is removed - REDUNDANT SIDE



(1A)\* SMA CURRENT/DIV: (2A) BUS CURRENT/DIV:

(200us) SWEEP RATE:

160 m 2 M 200 m

\*Using 0.1 \_\_hunt and IQOmV/Div on acope.

HAC TEST S32 TS 16603 Rev B 18 December 1980

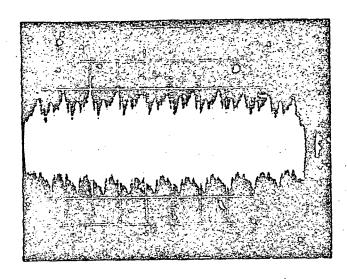
10.4 Performance test (continued)

FEB 11 3 1982

PARA

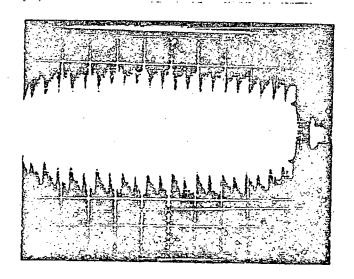
DESCRIPTION

5.10.7.1 Photograph of reflected input current ripple - FRIMARY SIDE



(1ma) CURRENT/DIV: ZAA A.
(10us) SWEEP RATE: DASE

5.10.7.1 Photograph of reflected input current ripple - REDUNDANT SIDE



(10us) SWEEP RATE: 10 Lase

3.10.5.1.1 input current - full load 520-1, 54/-4 (\$27-4 for RDT)

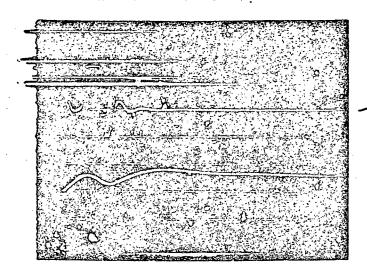


192.1920V 155.21

3.10.8.1.2 Input current w/c analog Same load

FEB 0 3 1982

5.10.8.1.3 Photograph of transients induced on input bus current and analog + voltage as snalog output is enabled - PRIMARY SIDE



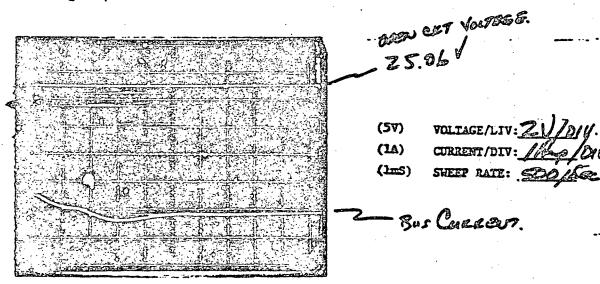
\_ 21.96 V

(1A) VOLTAGE/DIV: ZV/DIV

(1A) LURRENT/DIV: / Pop/DIV

(500ms) SHEEP RATE: SOOMS

5.10.8.1.3 Photograph of transients induced on input bus current and avalog + voltage as analog output is disabled - PRIMARY SIDS



-77-

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TS 16603 Rev B 18 December 1980

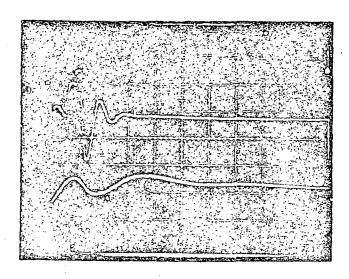
10.4 Performance test (continued)

G.

FEB 03 1992

RIT PARA. DESCRIPTION

5.10.8.1.3 Photograph of transients induced on imput bes current and amalog + nurput voltage as analog output is enabled - EDURART SDE.

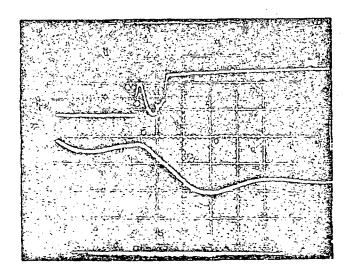


(27) VOLENCE/DIV: 24

(14) CURRENT/DIV: 1A

(500us) 5. III 347: 500 445

5.10.5.1.3 Photograph of transients induced on imput bus current and analog + output voltage as analog output is disabled - REDUNDANT SIDE.



(SV) VOLTAGE/DIV: 21

(LA) CURRENT/DIV: 1A

(las) STEP MIE: SONARCE

DVM SWITCH



TS 16603 Rev B 18 December 1980

### 10.4 Performance test (continued)

FEB 03 882

HEASUREMENT PRIMARY REDUNDANT

F. PARA. DESCRIPTION POSITIONS LIMITS

5.10.8.2.1 Input bus current w/o SMA S26-1, S27-2
+7V load (S27-4 for RDT)

142.21ml 125

5.10.8.2.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V is enabled - PRIMARY SIDE.

10 LAD 9.28 \$ VOC.

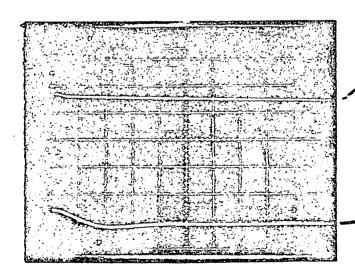
0011997 VOGAGE 7.526V

(5V) VOLTAGE/DIV: Z VOCTS/DI (1A) CURRENT/DIV: [Asc. 126].

(200ms) SWEEP RATE: SCOLLEGIS

- BUS CHELENT

5.10.8.2.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V is disabled - PRIMARY SIDE.



ONTHE VOLTEGE 6.37.782

(2V) VOLTAGE/DIV: ZVOTS/

(1A) CURRENT/DIV: [ [ [ [ ] ]

(2ms) SWEEP RATE: SOO SECO

– Carast





TS 16603 Rev B 18 December 1980

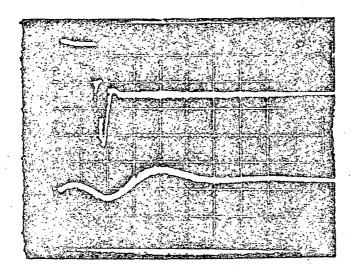
10.4 Performance test (continued)

FEB " 3 1982

EF. PARA

DESCRIPTION

5.10.8.2.2 Photograph of transients induced on input bus current and SMA +7 output voltage as SMA +7V is enabled - REDUNDANT SIDE

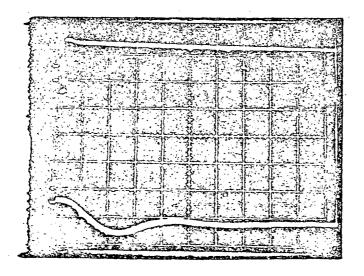


(5V) VOLTAGE/DIV: 71

(IA) CURRENT/DIV: /Am

(200 LS) SWEEP RATE: SON

5.10.8.2.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V is disabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: 2 U

(IA) CURRENT/DIV: 1A

(2ms) SWEEP RATE: SAA MISEC

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TS 16603 Rev B . 18 December 198

# 10.4 Performance test (continued)

SMA +29V load

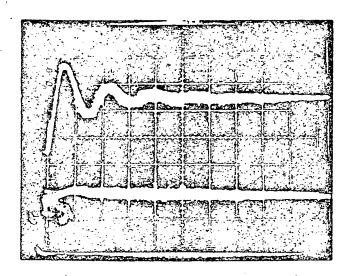
EF. PARA.

5.10.8.2.3

POOR	QUALITY	(\$35)
		CCO

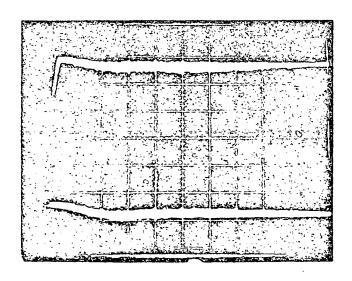
	DVM SWITCH	MEASUREMENT		
DESCRIPTION	POSITIONS	LIMITS	PRIMARY R	EDOND!
Input bus current w/o SMA +29V load	S26-1, S27-2 (S27-4 for RDT)	14856	W TO THE	1811

5.10.8.2.4 Photograph of transients induced on input bus current and SMA +29V output voltage as SMA +29V is enabled - PRIMARY SIDE



VOLTAGE/DIV: 1.01 ·(2V) (0.5V) CURRENT/DIV: 0.5 (1ms)

Photograph of transients induced on input bus current and SMA +29V output 5.10.8.2.4 voltage as SMA ±29V is disabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: 10 V/DIV (0.5A) CURRENT/DIV: 0.5 (lmS) SWEEP RATE: STORY



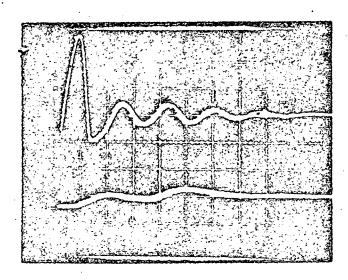
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

FEB U3 PER

EF, PARA, DESCRIPTION

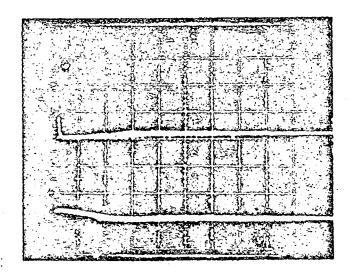
5.10.8.2.4 Photograph of transients induced on input bus current and SMA +29V output voltage as SMA +29V is enabled - REDUNDANT SIDE



(29) VOLTAGE/DIV: 11/ (0.54) CURRENT/DIV: 5 12

(les) Sueep Rate: Saglante

5.10.8.2.4 Photograph of transients induced on input bus current and SMA +29V output voltage as +29V is disabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV:

(0.5) CURRENT/DIV: . 5 P

(Ims) SWEEP RATE: See Ason



TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

DESCRIPTION

FEB 0 3 1982

LIMITS

MEASUREMENT
PRIMARY REDUNDANT

5.10.8.3.1 Input bus current w/o CDVU load

EF. PARA

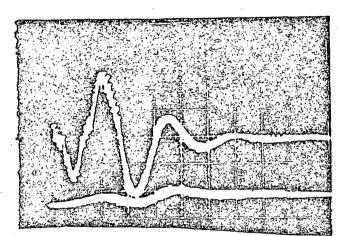
\$26-1, \$27-2 (\$27-4 for RDT)

DVM SWITCH

POSITIONS

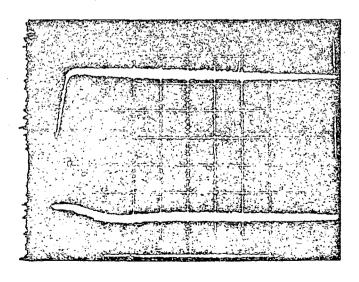
148.29 J 15311

5.10.8.3.2 Photograph of transients induced on input bus current and CDVU output voltage as CDVU is enabled - PRIMARY SIDE



UNLUSTED 9.234

5.10.8.3.2 Photograph of transients induced on input bus current and CDVU output voltage as CDVU is disabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: AND DIV.
(0.5V) CURRENT/DIV: O SALEDIV.
(1ms) SWEEP RATE: SOURCE DIV.



TS 16603 Rev B 18 Docember 1980

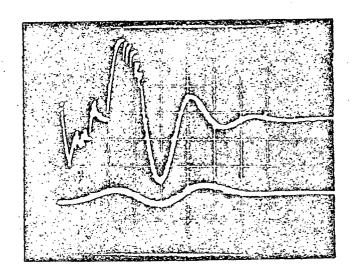
10.4 Performance test (continued)

FEB 0 3 1932

F. PARA

DESCRIPTION

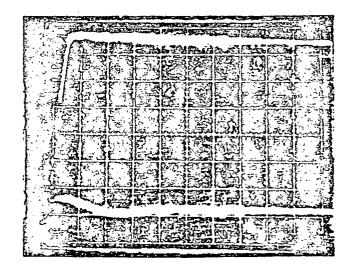
5.10.8.3.2 Photograph of transients induced on input bus current and CDVU output voltage as CDVU is enabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: 11/ (0.5A) CURRENT/DIV: 4

(1ms) SWEEP RATE: \$80.0400

5.10.8.3.2 Photograph as transients induced on input bus current and CDVU output voltage as CDVU is disabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: 11/ (0.5A) CURRENT/DIV: 5A

(los) sweep rate: \$60,000



TS 16603 Rev B 18 December 1980

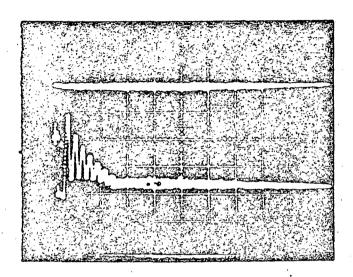
10.4 Performance test (continued)

FEB 0 3 1882

TF. PARA

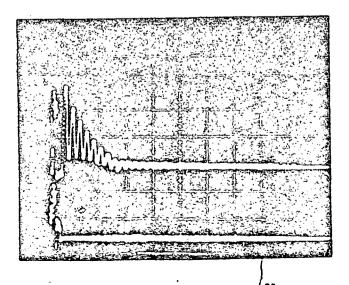
DESCRIPTION

5.10.9.1 Photograph of turn-off transient of input bus voltage and input bus current as bus voltage is removed - PRIMARY SIDE



(5V) VOLTAGE/DIV: SVAN.
(5A) CURRENT/DIV: SAME (500us) SWEEP RATE: SIDOSEAN

Photograph of turn-off transient of input bus voltage and input bus current as bus voltage is removed - REDUNDANT SIDE



(5V) VOLTACE/DIV: SV

(5A) CURRENT/DIV: SA

(500us) SWEEP RATE: Source

700

Tans

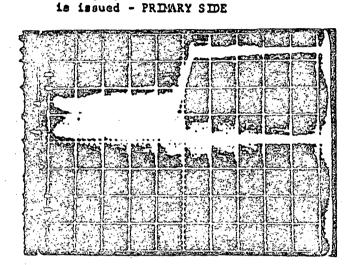


TS 16603 Rev B 18 December 198

FEB 03 1932

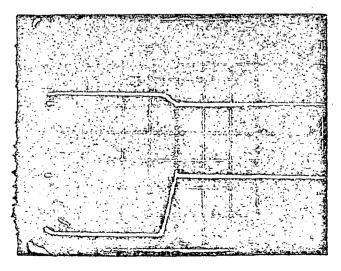
#### 10.4 Performance test (continued)

REF. PARA	DESCRIPTION	DVM SWITCH POSITIONS	Limits	MEASI PRIMARY	IREMENT REDUNDA
5.10.9.2	UUT stays off when bus is respplied.	S1-ON (S2-ON for RDT)	•		K
5.10.9.3	Photograph of turn-on tre	insient of bus vol	taco and curre	at an ON com	nand



(5V) VOLTAGE/DIV: SV /DIV.
(5A) CURRENT/DIV: SALAN
(100ms) SWEEP RATE: //OpenSalan

5.10.9.3 Photograph of turn-on transient of bus voltage and current as ON command is issued - REDUNDANT SIDE



(54) VOLTAGE/DIV: 6V (5A) CURRENT/DIV: 5A (100ms) SWEEP RATE: 100 m/Sec



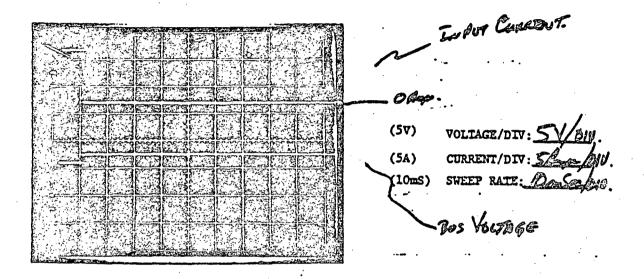
TS 16603 Rey B 18 December 1980

10.4 Performance test (continued)

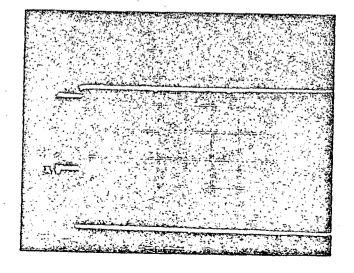
FEB 0 3 1982

F. PARA. DESCRIPTION

5.10.9.4 Photograph of turn-off transient of input bus voltage and current as OFF command is issued - PRIMARY SIDE



5.10.9.4 Photograph of turn-off transient of input bus voltage and current as OFF command is issued - REDUNDANT SIDE



(5V) VOLTAGE/DIV: 5U

(5A) CURRENT/DIV: SA

(10ms) SWEEP RATE: 10 m Sol



TS 16603 Rev B 18 December 1

#### 10.4 Performance test (continued)

#### FEB 0 3 1989

20.7		-	100 3 195	₹ .	
REF. PARA.	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	PRIMARY	REDU
5.10.9.5 5.10.9.6	Record	\$27-2 (\$27-4) (\$27-4 (\$27-2)	-	15 <u>2.13</u> 21	
3.23.7.3	Record	S27-2 (S27-4)		· · · · · · · · · · · · · · · · · · ·	المقالمة الأ
			•	31,11 pav	1 <u>28.</u>
5.10.9.7	Record that UUT turns on.	(Checkmark)		••	سيل
5.10.10.1	Input bus current AFTER it reads ~ 17A AND input bus voltage reads ~ 21V.	S26-1, S27-2 (S27-4 for RDT)		15a.16ev	150
5.10.10.2	Input bus voltage with 17.0A load	S26-1, S27-1 (S27-3 for RDT)		23.04	23.1
5.10.10.3	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)		4.534	<u>4.4</u>
5.10.10.4	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)	. <del></del>	3.503	3. <u>\$</u>
	Input bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)	,	23.09	23.6
	Input bus current	\$26-1, \$27-2 (\$27-4 for RDT)		114.50mv	THE
5.10.10.5	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)		3.061	2.2
	Input bus voltage.	\$26-1, \$27-1 (\$27-3 for RDT)	• •	<u>23.03</u>	23.
	Input bus current	S26-1, S27-2 (S27-4 for RDT)		100.73 MV	<u> </u>
5.10.10.6	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)		2.497	73.0
	Input bus voltage	S26-1, S27-1 (S27-3 for RDT)	500 A5-	23.01	7
•	Input bus current	\$26-1, \$27-2 (\$27-4 for RDT)	·	85.57 <sub>mv</sub>	897
5.10.10.7	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)		2.062 2.Edland	3.0
	Input bus voltage	S26-1, S27-1 (S27-3 for RDT)	23.06 _	2-062	اندِ 22
	Input bus current	S26-1, S27-2 (S27-4 for RDT)		73.08mV	76.56



TS 16603 Rev B 18 December 198

#### 10.4 Performance test (continued)

FEB 0 3 1982

			LED no BRES	
	9.00 <b>20 79.07</b> AU	DVH SWITCE		MEASUREMENT
REF. PARA.	DESCRIPTION	POSITIONS	LIKITS	PRIMARY REDUNDA
5.10.10.8	Imput current telemetry	526-4, 528-2 (528-4 for RDT)		<u> 1.46</u>
	Imput bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)	23.0	2 23.0
	Input bus current	\$26-1, \$27-2 (\$27-4 for RDT)	57.5	100V 59.24
5.10.10.9	Imput current telemetry output	\$26-4, \$28-2 (\$28-4 for RDT)		050 1.81
	Imput bus voltage	S26-1, S27-1 (S27-3 for RDI)	23.	02 23.6
:: ::::	Imput bus current	526-1, S27-2 (S27-4 for RDT)	41.	55 47.45
5.10.10.10	Imput current telemetry output	\$26-4, \$28-2 (\$28-4 for RDT)	(	0.5417 .569
	Imput bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)	. •	23.02 23.86
	Input bus current	\$26-1, \$27-2 (\$27-4 for RDT)	2	4.53 m 30.74
5.10.10.11	Imput current telemetry output	S26-4, S28-2 (S26-4 for RDT)	0.23	311
·	Imput bus voltage	S26-1, S27-1 (S27-3 for RDT)	23.0	23.69
	Imput bus current	S25-1, S27-2 (S27-4 for RDT)	20.18	<u>av</u> 22.2
5.10.10.12	orthar carrest rejements	\$26-4, \$29-2 (\$28-4 for RDT)		4 2009
	Input bus voltage	\$25-1, \$27-1 (\$27-3 for RDT)		23.00
	Input bus current	\$26-1, \$27-2 (\$27-4 for RDT)		3 MV 13.87
5.10.11.1	Band le output voltage	<b>\$26-1, \$27-5</b>	23.53	23.70
5.10.11.2	Band 1- ourpur voltage	s27-6	- 23.0	
5.10.11.3	1 2+ 1	<b>527-7</b>	23.7	23.25
5.10.11.4	2-	S27-8	- 23.	79 -23.48
5.10.11.5	3+	527 <b>-</b> 9	24	12 23.50
5.10-11.6	♥ 3- ♥	\$ \$27-10	25-	38 - 23.27
5.10.11.7	Band 4+ output voltage	\$26-1, \$27-11	23,	72 23.62



TS 16603 Eav B

#### 10.4 Performance test (continued)

REF PARA	DESCRIPTION	DVM SWITCH POSITIONS	FED 0 3 1982 THEASUNGMENT
5.10.11.8	Bond 4- output voltage	S26-1, S27-12	-2256 -2251
5.10.11.9	5,7+	S28-2, S27-1	22.97 23.68
5.10.11.10	5,7-	<b>827-2</b>	-7.2.72 -23.6
5.10.11.11	6+	s27-3	22.86 72.9
5.10.11.12	Band 6-	527-4	-23.09 -23.1
5.10.11.13	SMA Htr +	S27-5	24.0 25.0°
5.10.11.14	Htr -	-S27 <b>-</b> 6	-54 <u>60</u> -349
5.10.11.15	+7V	S27-7	9.219 N/A
5.10.11	+7V	(S27-8	N/A
		For RDT)	31.14 9.145
5.10.11	+29♥	S27 <b>-</b> 9	81.67
5.10.11	+29V	(S27-11 For EDT)	N/ACTIFICATION
5.10.11	-29V	\$27-10	-31. <u>36</u> H/A
	SMA -29V	\$26-2, (\$27-12 for RDT)	B/A - 31.3
5.10.11.18	Radiometer	S26-3, S27-2	9. <u>459</u> 9.69
5.10.11.19	CDVU	S27-3	9.159 9.22
5.10.11.20	Analog +	s27-4	25.08 J'T
5.10.11.21	Analog -	s27 <b>-</b> 5	-23.60 -23.7
5.10.11.22	Electromech.	s27-6	38. <u>94</u> 38.7
5.10.11.23	Outges	s27-7	400 <u>46</u> 99.5
5.10.11.24	Parasitic &	\$27 <del>-9</del>	31.19 A/A
	Parasitic output voltage	S26-3, (S27-10 for RDT)	H/A 31.65
5.10.11.25	Bend 1+ TM output	s26-4, s28-5	<i>\$.2<u>87</u></i> 44.32
5.10.11.26	1-	\$28-6	4238 475
5.10.11.27	2+	S28-7	4.32/ 4.33:
5.10.11.28	2-	S28-8	4.303 2:34
5.10.11.29	3+	S28-9	4.379 4.27
5.10.11.30	3-	\$28-10	4-256 23.331
5.10.11.31	. 4+ .	S28-11	4299 4291
5.10.11.32	4-	\$26-4, \$28-12	4.277 4.26
5.10.11.33	Band 5,7+ TM output	\$26-5, \$28-1	) K. 188 41211

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TS 10003 Rev B

#### 10.4 Performance test (continues)

	·	DVM SHITCH	FEB 03 222	987A C1	
RZP PARA	DESCRIPTION	Positio:s	The lie	PRIMARY	REDURIDALTI
5.10.11.34	=Band 5,7- TH output	\$26-5, 828-2		4.167	4192
5.10.11.35	6+	S28-3		4.129	4.160
5.10.11.36	<u> </u>	<b>528</b> -€	•	206	<1.210
5.10.11.37	SNA Htr +	828-5		4.651	0.669
5.10.11.38	Etr -	\$28 <b>-6</b>		440	4507
5.10.11.39	+70	828-7 (S28-8 & xor RDT)		5,688	€.634
5.10.11.40	+29V	\$28-9 (\$28-13 fo RDT)		4.247	4318
5.10,11.41	SMA -29V	526-5, S28-10 (S28-12 for RDT)		3.958	<u> 9.967</u>
5.10.11.42	Radiometer	\$26-6, \$28-2	<del>-</del>	.122	<u> 5.248</u> .
5.10.11.43	CDVU	S28-3		673	5.10.7
5.10.11.44	Analog +	S28-4		L. Ale	4.55
5.10.11.45	Analog -	\$28-5		3.9/3	<u>a.056</u>
5.10.11.46	Electromech.	<b>∲</b> \$28-6	•	1754	4,235
5.10.11.47	Outges - IH output	S26-6, S28-7		4.97 3	4951
5.10.12.1	Bus voltage	\$26-1, \$27-1 (\$27-3 for EDT)		2.9 <u>6</u> 2.255	2 <u>3.06</u>
5.10.12.2	Input bus current	\$25-1, \$27-2 -{\$27-4 for EDT)	50.49 4		SOA SA
5.10.12.3	-SMA Etr + autput solf	age S26-2, <b>3</b> 27-5		<u> 21.52</u>	21.75
5.10.12.4	Htr+ ripp	le —Seer or Scope	450 to ph-		25 AV
5.10.12.5	Htr - volt	age \$26-2, \$27-6	•	- 22.03	-2228
5.10.12.6	SMA Htr - ripp	le Seen on Scope	≪50 of pk-	pk <u>40</u>	30
5.10.12.7	COVU Vol:	age S26-3, S27-3		7.355	<u> 7.64</u> 8
5.10.12.8	COVU ripp	le Seen on Scope	<b>⊘</b>	± <u>≉0</u>	40
5.10.12.9	Outgas - output volt	age S26-3, S27-7		\$6_53	86.28
5.10.12.10	Outgas - output ripp	le Seen on Sciope	2.50V pk-pk	180 AV	190
,5.10.12.11	Perssitic output volt	sge S26-3. 327-9 (S27-10 for EDT)		30.22	30.36
5.10,12.12	Parasitic output rip;	le Seen on Scope	< 900 av pk-	pk 90	96

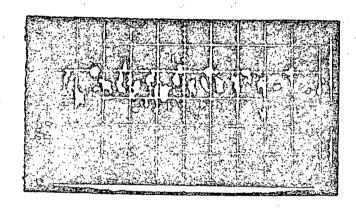
FEB 03 882



TS 16603 Rev B 18 December 1980

#### 10.4 Performance test (continued)

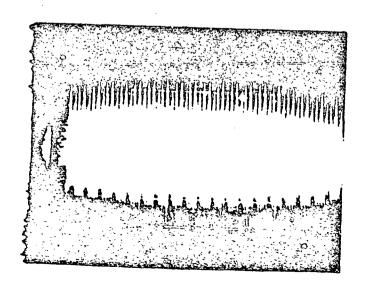
AEF, PARA,	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	MPAST PRIMARY	JREMENT REDUNDANT
5.10.13.1	Imput current telemetry	526-4, 528-2		1.367	1.244
		(\$28-4 for RDT)		2,939	5.980
5.10.13.2	SMA Etr + output	<b>S26-5</b> , <b>S28-5</b>			
5.10.13.3	SMA Htr -	<b>\$26-5, \$28-6</b>		3.927	লতব্র
5,10.13.4	CDVU J	<b>526-6, S28-3</b>		4.183	478
5.10.13.5	Outges output telemotry	\$26-6, \$28-7°		4.3 <u>19</u>	4.339
5.10.14.1	Photograph of reflected	input current rippl	e in outra	s mode - PRIMA	RY SIDE



(2mm) CURRENT/DIV: 2 MA.C.

(10ms) Sweep Rate: 10 115

5.10.14.1 Photograph of reflected input current ripple in outgas mode - REDUNDANT SIDE



(2mA) CURRENT/DIV: 2 AN MA.C.

(10ms) SWEET RATE: 10 Man

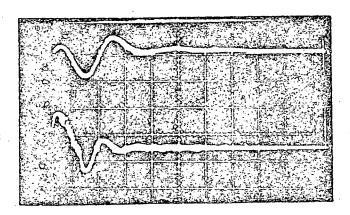
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

FEB 03 800

DVH SWITCH MEASUREMENT REF. PARA. DESCRIPTION POSITIONS LIMITS REDUNDANT PRIMARY 5.10.15.1.1 Input current with CDVU S26-14 S27-2 4260 off. (\$27-4 for RDT)

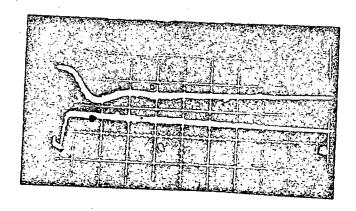
5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is enabled - PRIMARY SIDE



VOLTAGE/DIV: 2 (200mA) CURRENT/DIV: 200 me

SWEEP RATE: 1 92 5

5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is disabled - PRIMARY SIDE



VOLTAGE/DIV: 2 / (200mA) CURRENT/DIV: 200 60 (2mS) SWEEP RATE: 2 mS



TS 16603 Rev B 18 December 1980

#### 10.4 Performance test (continued)

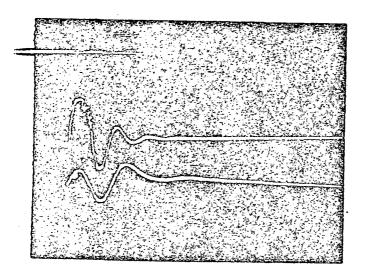
FEB 03 1982

EF. PARA.

1.

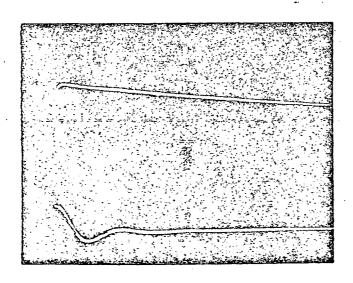
DESCRIPTION

5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is enabled — REDUNDANT SIDE



(200 VOLTAGE/DIV: Z V (200 MA) CURRENT/DIV: 260 MA (1ms) SWEEP RATE: 100 S

5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is disabled — REDUNDANT SIDE



(2V) VOLTAGZ/DIV: 2 V
(200mA) CURRENT/DIV: 200 pm ff
(2mS) SWEEP RATE: 1 pm S

SSE

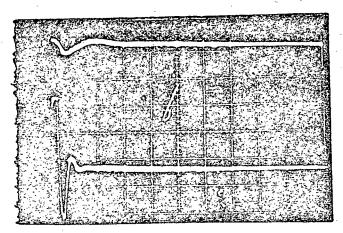
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

FEB 0 3 1982

ref para	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS		REMENT REDUNDAN.
5.10.15.2.1	Input bus current with outgas disabled	\$26-1, \$27-2 (\$27-4 for RDT)		17.37mV	17.61

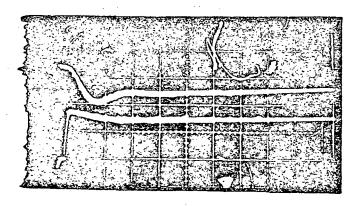
5.10.15.2.2 Photograph of input bus current and outgas voltage as outgas load is enabled - PRIMARY SIDE



(5V) VOLTAGE/DIV: 5 V
(2A) CURRENT/DIV: 2 /7

(lms) SWEEP RATE: 1:n5

5.10.15.2.2 Photograph of input bus current and outgas voltage as outgas load is disabled - PRIMARY SIDE



(5V) VOLTAGE/DIV: 5 V

(2A) CURRENT/DIV: 3 A

(2mS) SWEEP RATE: 1 m S

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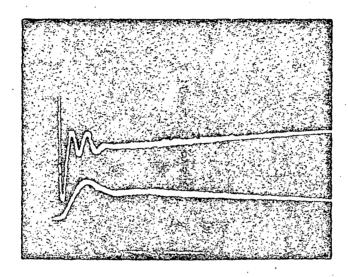
FEB 03 982

TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

TF. PARA. DESCRIPTION

5.10.15.2.2 Photograph of in it is current and outges voltage as outges load is enabled - "T T N IDE

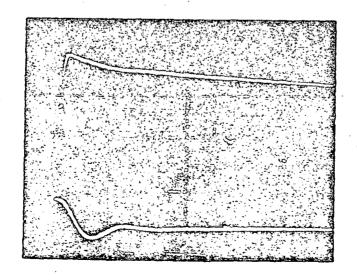


(5V) VOLINGE/DIV: SV
(2A) CURRENT/DIV: 2 9

(500us) SHEEP RATE: 10 5

5.10.15.2.2 Photograph of input bus current and outgas voltage as outgas load is disabled - REDUNDANT SIDE

he Mulai



(5V) VOLTACE/DIV: 5 U

(2A) CURRENT/DIV: 2 A

(lms) SWEEP RATE: Line S

TS 16603 Rev B

#### 10.4 Performance test (continued)

REF. PARA.	DESCRIPTION	DOM SUITCE POSITION	LIMITS	PRIMARY REDUNDAN
5.10.16.1	BPS voltage	\$26-1, \$27-1 (\$27-3 for RDT)	•	B.O. (49) 250)
5.10.16.2	BPS current	S26-1, S27-2 (S27-4 for EDT)	•	30.61 (x) 21.214
5.10.16.3	SMA Htr +output voltage	<b>526-2</b> , <b>527-5</b>	•	21.51 (1)21.770
5.10.16.4	SMA Htr +load current	S26-8, S34-1		46.37 (13) 46.94
5.10.16.5	SMA Htr -output voltage	S26-2, S27-6	-	2/27 (14) 22.19
5.10.16.6	SMA Htr -load current	S26-8, S34-2	,	· 8.63 (m 8.75
5.10.16.7	CDVU output voltage	\$26-3, \$27-3		7.44 (20) 7.63
5.10.16.8	CPVU load current	S26-8, S34-10		2667 (45) III.S
5.10.16.9	Parasitic output voltage	\$26-3, \$27-9 (\$27-1	.0) 36.4	Mas Mas
5.10.16.10	Parasitic load current	S26-8, S34-7	•	147.33 (-0) 142.69
5.10.16.11	Input power (5.10.16.1 x 5.10.16.2)			47.194 48.864
5.10.16.12	Output power ((5.10.16.3 x 5.10.16.4) + (5.10.16.5 x 5.10.16.6) + (5.10.15.7 x 5.10.16.8) + (5.10.16.9 x 5.10.16.16		) - - -	16.873 17.431
5.10.16.13	Efficiency ((5.10.16.12) ÷ (5.10.16.11)) x 100%	· .		3 <u>5.8%</u> 3 <u>5.7</u> %

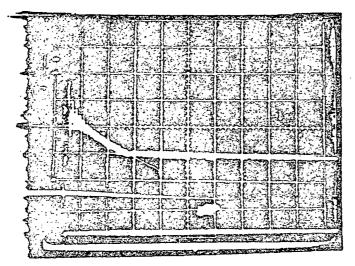
TS 16603 Rev B 18 December 1980



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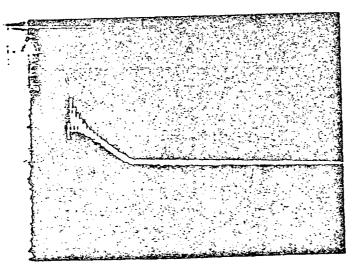
10.4 Performance test (continued)

5.10.17.1 Photograph of input bus current and input bus voltage as is disable - PRIMARY SIDE



(5V) VOLTAGE/DIV: <u>SV</u>
(2A) CURRENT/DIV: <u>2 /3</u>
(1ms) SWEEP RATE: Im S

as is disabled - REDUNDANT SIDE



5V) VOLTAGE/DIV: 5V

2A) CURRENT/DIV: 2 A

Lms) Sweep rate: 1 5

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TS 16603 Rev B 18 December1980

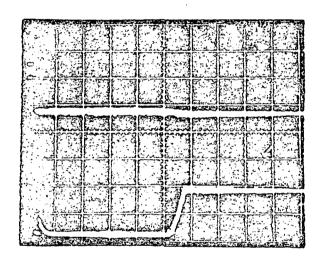
10.4 Performance test (continued)

5.10.17.2 Unit stays off (check)



Redundant

5.10.17.3 Photograph of input bus current and input bus voltage as is enabled - PRIMARY SIDE

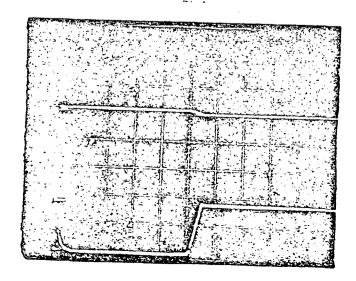


(2V) VOLTAGE/DIV: 5.V

(2A) CURRENT/DIV: 2 A

(100ms) SWEEP RATE: 100 ms

5.10.17.3 Photograph of input bus current and input bus voltage as as is enabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: SV (2A) CURRENT/DIV: 2A (100mS) SWEEP RATE: 166 ATS



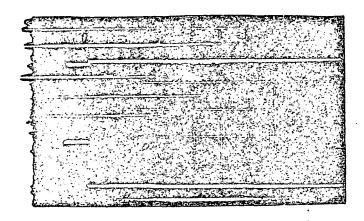
FEB 03 232

Rev B 18 December 1:

10.4 Performance test (continued)

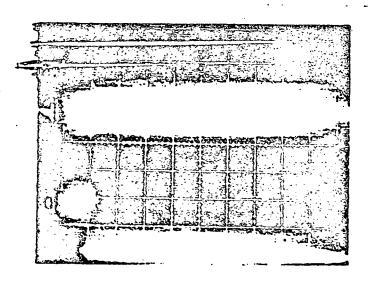
SAMOO A

5.10.17.4 Photograph of input bus current and input bus voltage as is disabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: 5 1/ (2A)- CURRENT/DIV: 2 A (10mS) SWEEP RATE: 10 mS

5.10.17.4 Photograph of input bus current and input bus voltage
\_as is disabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: 5U
(2A) CURRENT/DIV: 219
(10ms) SWEEP RATE: 10 ms 5

FEB 0 3 1982



TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

DESCRIPTION

DVM SWITCH **POSITIONS** 

LIMITS

MEASUREMENT

PRIMARY REDUNDANT

Record that UUT operates 5.10.17.5 correctly.

(checkmerk)

5.10.18.1

PARA

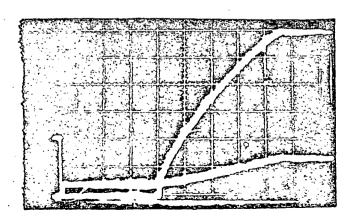
Photograph of input bus current and MUX output voltage as MUX enable command is issued (all loads are ON except outgas) - PRIMARY SIDE

(5V) VOLTAGE/DIV: 51

(5A) CURRENT/DIV: 5 A

(20mS) SWEEP RATE:

Photograph of input bus current and parasitic output voltage as parasitic 5.10.18.2 enable command is issued (all loads are ON except outgas) - PRIMARY SIDE



VOLTAGE/DIV: 50 (5V) CURRENT/DIV: 5/ (5A)

(20ms) SWEET RATE: 10115



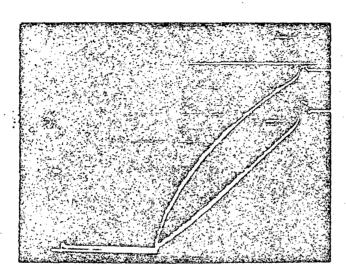


TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

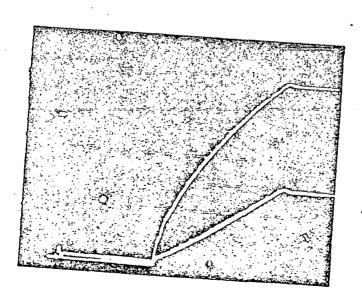
FEB U 3 1982

.10.18.1 Photograph of input bus current and MUX output voltage as MUX enable command is issued (all loads are ON except outgas) — REDUNDANT SIDE



(5V) VOLTAGE/DIV: SN (5A) CURRENT/DIV: SP (20ms) SWEEP RATE: +0 => S

5.10.18.2 Photograph of input bus current and MUX output voltage as parasitic enable command is issued (all loads are ON except outgas) - REDUNDANT SIDE



(5v) · Volts/Div: SV —(5A) Current/Div: SA — -(20mS) Sweep Rase: 40 m S

feb uj poz

HAC TEST S 32

TS 16603 Bev B \$22-2 7-6-8

#### 10.4 Performance tost (continued)

REP. PARA.	PESCRIPTION	ENTING MVE	~LDHTS	Masu Primary	REDUNDAN
5.10.18.4	Undervoltage Trip Point (ON/OFF)	826-1, \$27-1 _(\$27-3 for RDT)	18.0 <u>2</u> 1.507	18.09	180
5.70.18.5	TOUT stays OFF		$\mathcal{G}$	1-19-6	1
5.10.18.6	- Haderelinge Trip Ibini (OFF/ON)	_526-1, S27-1 (S27-3 for RDT)	19.0 ±1.500	19.08	18.8
-5.10.18.7	Overvoltage Trip Foint	=826-1, 1627-1 -{\$27-3 for NDT)	38.0 ± 27	38.09	38.9
5.10.18.8	-UUT stays OFF	•	• .	<u></u>	V
5.10.18.9	UUT turns ON			V	1/

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2/3/82 DATE ELLANS (BENISON)

38



TS 16603 Rev B 18 December 1980

					•,			
10.4 <u>F</u>	erformance te	st - Long	Form		FEB	U 3 1982		
PROTOFLIGHT	DNA.	OR PLICET			s/n	004	_TEMPERATURE	: 32° F.
IN-PROCESS_		QUAL	DNA		OR AC	CEPT_NCE_		
TESTING PHAS	E FRIOL COLL	Long F	e e m	L	INE AOI	TACE:	28.0	VOLTS
			DVM SW	ਗਾਵ			MEASUT	rmpu <del>r</del>
REF. PAFA.	DESCRIPTIO	И	POSITI		LIMY	rs		REDUCIDANT
5.10.1.1	Calibrate cm	d gen	•••			·		/
5.10.2.1	Input bus cu	rrent	\$26-1, (\$27-4 redum	for		· ·	234M1	23.1mm
5.10.2.2	MUX output v	oltage	526-3,	-	30.0	±0.90V	J9.84V	30.09
5.10.2.3	MOX load cur	•		s27 <b>-</b> 12		±0.404	32.34aV	32.76 mm
The rest of	Section 5.10.	2 require	s only (	rheckiro	י שמורי	ece = ird	icata by cha	clmarks
					, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		- care by care	· · · · · · · · · · · · · · · · · · ·
5.10.2.4.1	B1 + output	voltage	S26-1,	S27 <b>-</b> 5	•	• •	~	
5.10.2.4.2	B1 -	•	1	<b>327-5</b> ··		•		
5.10.2.4.3	B1 -			<b>\$27-5</b>				
5.10.2.4.4	B1 +			<b>S27-</b> 7				
5.10.2.5.1	B2 +			S27 <b>-</b> 7				7
5.10.2.5.2	B2 -			<b>\$27-</b> 8			V	
5.10.2.5.3	B2 -			<b>\$27-</b> 8				~
5.10.2.5.4	B2 +		- 1	<b>\$27-7</b>		•	V	
5-10-2.6.1	B3 +		1	\$27. <del>-</del> 9	•	••	~	
5.10.2.6.2	B3 -	•		S27-10		•	. 4	
5.10.2.6.3	B3 -			s27-10				
5.10.2.6.4	B3 ÷		Į	s27-9				_
5.10.2.7.1	B4 +			s27-11				
5.10.2.7.2	34 <b>-</b>			s27 <b>-</b> 12	•		V	
5.10.2.7.3	B4 -		\$	s27-12				<u> </u>
5.10.2.7.4	B4 ~		S26-1,	s27-11			1-	_ <u></u>
5.10.2.8.1	B5,7+		S26-2,	\$27 <b>-</b> 1	•		~	
5.10.2.3.2	B5,7-		- 1	\$27-2			V	
5.10.2.8.3	B5,7-		-	<b>527-2</b>				
5.10.2.8.4	B5,7+		1	\$27-1		-	<u>~~</u>	
5.10.2.9.1	B6 +		J	s27 <b>-</b> 3	, ,	نىق مى دى شەر ر	<u> </u>	
5.10.2.9.2	B6 - output	voltage	S26-2,	<b>\$27-4</b>	Took	5 3 3		
					' 6 "	15/2		(29)

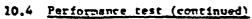


#### 10.4 Performance test (continued)

		10.4 P	erformance test (c	<del>56223364</del>	<u>)</u>				
		•	•		PERM	STITUL	FEB 0 3 1982	9473 A 4978	
1	<u>ref.</u>	PARA.	DESCRIPTION			ZZURS	Lieuz.		ELECT.
•	5.1D.	2.9.3	B6 - surpur volca	i Sta	526	-2, 527-4		8	
		2.9.4	% → output volta			-2, 527-3	•		
		2.10.1	•	_		\$27-5			
		2.10.2	•			S27-6	•	4.0	
		2.10.3				S27-6	•	: ———	
		2.10.4	_		٢	7 S27-5			
	5.10 <i>.</i>	2.:	-70		525	-2, <b>S27-</b> 7			
	5.10.	2.11.2				-2 for MT)			
	3.10.	2.12.1	+29V	•	-	-2, S27 <i>-</i> 9			
						-11 for EDT)			
	5.10.	2.12.2	-29⊽		-	-2, S27-10			
						-12 for RM()			
	5.10.	2.12.3	্ল -29⊽		•	-2, 527-10		<i>y</i>	8
;	5.10.	2.12.4	SMA 823 -297			-2, S27-9			
	5.10.	1.11.1	Radiometer			-3, 527-2			
	5.10.	2.13.2	Racioneter			S27-2			1
	5.10.	2.14.1	ævυ			S27-3	•		
	5.10.	2.14.2	COVE			\$27-3		1	
	5.10.	2.15.1	Analog +			527 <del>-4</del>		V	
	5.10.	2.15.2	inalog -			S27-5		<i>V</i>	
	5.10.	2.15.3	analog			S <b>27-5</b>			
	5.10.	2.15.4	Analog +			S27- <b>₄</b>		1	
	5.10.	2.16.1	Electronesi.			S27 <b>-</b> 6			
	5.10.	2.16.2	Electroneci.	7	•	S27-6	•		
	5.10.	2.17.1	Outges output	voltage	526	~3、S27 <b>-</b> 7			_
•	5.10.	3.1	Bus voltage		<b>S</b> 26	-1, S27-1			
					(527	-3 for NDT)		29.00 A	19.85
	5.10.	.3.2	MIX load current		S25	-3, 527-12	4_330 ±0_02	SAMU 3 Find	41.32
	5.10.	3.3	Bus current		526	-1, 527-2		<b>₫</b> ₽	<del>-</del>
•		•			(527	→ for EDI)		1966(5	g) <u>131.08</u>
	5.10.	3.3.2	3PS Voltage		526	-1, 527-1 S27-3)		BBOOV	<u> </u>
	5.10.	.3.3.3	BPS Current		\$26	(527-2)	4	39 <u>2319</u> 1	<u>631.41</u>
	5.10.	.3.3.4	MIX Current		S25	-3, S27-12	•	4/13/201	41.35
			w <u>_</u>			-67-			(30)

75 1660) Rev B 18 December 1980

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			. •	•
	,	क्राम ज्यादाता		BASURDAENT
REF, PARA,	DESCRIPTION	POSITIONS	TIMITS	PRIHARY REDUNDA
5.10.3.4.1	B1 + output voltage	\$26-1, \$27-5	20.50 ±2.500	429.49 (1) +20.68
5.10.3.4.2	B1 + output ripple	Look on Scope	≪000 av pk-pk	2001 30
5.10.3.4.3	Bl - output voltage	526-1, S27-6	-20.50 ±2.507	P 5 3 40.69
5.10.3.4.4	Bl - output ripple	Look on Scope	◆ 000 mV pk-pk	80 80
5.10.3.5.1	32 + output voltage	\$26-1, \$27-7	20.50 ±2.300	72.36 (3) 20.55
5.10.3.5.2	B2 + output ripple	Look on Scope	≪500 aV ph-pk	20 20
5.10.3.5.3	32 - output voltage	S26-1, S27-8	-20.50 <u>+</u> 2.500	- 70.46 (1)-26.57
5.10.3.5.4	B2 - output ripple	Seen on Scope	<600 m7 pk-pk	20 20
5.10.3.6.1	33 + output voltage	\$26-1, <b>\$27-9</b>	20.50 ±2.50V	+7043 (5) 20.50
5.10.3.6.2	B3 + output ripple	Seep on Scope	≪500 av pk-pk	20 20
5.10.3.6.3	B3 - output voltage	\$26-1, \$27-10	-20.50 <u>+</u> 2.50V	-20.38 (6)-20.57
5.10.3.6.4	B3 - output ripple	Seep on Scope	≪800 mV pk-pk	<u>26                                    </u>
5.10.3.7.1	B4 + output voltage	\$26-1, \$27-11	20.50 ±2.50V	+248 7 10.68
5.10.3.7.2	84 + output ripple	Seen on Scope	<b>≪500</b> m♥ pk-pk	<u> 28 20</u>
10.3,7.3	34 - output voltage	526-1, 527-12	-20.50 ±2.50V	-20,50 (B)-10.69
5.10.3.7.4	B4 - output ripple	Seen on Scope	<500 mV pk-pk	20 30
5.10.3.8.1	B5.7 + voltage	\$26-2, \$27-1	20.50 ±2.500	+20.26 (9) 20.20
5.10.3.8.2	35,7 + ripple	Seen on Scope	≪500 mV pk-pk	30 00
5.10.3.8.3	B5.7 - voltage	\$26-3, \$27-2	-20.50 ±2.50V	-20.20 (10)-20.23
5.10.3.8.4	B5,7 - ripple	Sees on Scope .		30 40.
5.10.3.9.1	B6 + voltage	S26-2, S27-3	20.50 ±2.50V	420.39 (11) BASE
5.10.3.9.2	36 + ripple	Seen on Scope	≪500 mV pi -pk	20 20
5.10.3.9.3	B6 - voltage	\$26-2, \$27-4	-20.50 ±2.50V	-20.40 (12) 20.57
5.10.2.9.4	B6 - ripple.	Seen on Scope	<500 mV pk-pk	<u> 20 ' eo</u>
5.10.3.10.1	SMA Htr + voltage	S26-2, S27-5	21.20 ±2.12V	7227 (13) 3246
5.10.3.10.2	SMA Htr + ripple	Seen on Scope	√530 mV pk-pk	20 20.
5.10.3.10.3	SMA Rtr - voltage	S26-2, S27-6	-21.20 ±2.12 V	- 23.74 (14) - 22.95
5.10.3.10.4	SMA Htr - ripple	Seen on Scope	≪30 mV pk-pk	<u>ZQ</u> =
5.10.3.11.1	SMA +7V Voltage	\$26-2, \$27-7 (\$27-8 for RDT)	7.10 ±0.30V	7.707 (15) 7.818
5.10.3.11.2	SMA +7V output ripple	Seen on Scope	<10 ≥V pk-pk	30 40

Ts 16603 New B 18 December 1930

#### 10.4 Pariamence test (continued)

F				CASE OF THE
BEE PARA	DESCRIPTION	10 6 13 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	LEGIS	BUAN DEPEND
5.10.3.12.1 528	4 +29V cutput voltage	525-2, \$27 <i>-</i> 9 (\$27-11 &0x BDY)	29.50 ±1.557	20.43 (16) 30.69
5.10.3.12.2 Se	A +29V ripple	Seen on Scope	370 eV. pt-pk	40 50
5.10.3.12.3 @	A -29V voltage	\$25-2, \$27-10 (\$27-12 fer MT)	-29.50 <u>+</u> 1.567	-30.42(17)-30.70
5.10.3.12.4 \$25	A -29V ripple	Seas on Scope	<b>4870 aV ph-78</b>	40 30
5.10.3.13.1 MI	I voltage	<b>526-3</b> , 327-1	30.00 <u>4</u> 0.907	80.80 (18) 80.60
5.10.3.13.2 KI	I ripple	Seem on Scope	<000 5√, pk-ph	60 30
5.10.3.14.1 Ra	dicmeter voltage	52 <del>6-3</del> , 227-2	8.50 ±0.85V	<u> 2465 (19) 8.481</u>
5.10.3.14.2 Ra	diameter ripple	Sees on Scope	<b>₹</b> 44 € 020	30 30
3.10.3.13.1 CD	W voltage	526-3, 527-3	8.00 ±0.807	7.698 (2) 7.564
5.10.3.15.2 cm	VV ripple	Sees en Scope	<b>44</b> 68 pk-pk	20 80
9.10.3.16.1 Am	alog + Voltage	526-3, 327-å	21.20 ±2.127	88.35 (2) 22.5/
5.10.3.16.2 Am	alog + rippla	Som on Scope	<b>4</b> 500 € 95 95 95	30 30
10.3.16.3 An	elog - voltage	S26-3, S27-5	-21.20 ±2.12V	-22. Can-22.58
.0.3.16.4 An	alog - ripple	Sees on Scope	<830 BP pk-pk	20 30
5.10.3.17.1 El	ectremeth. voltage	526-3, <b>527</b> -6	23.40 ±3.347	33.08 CA 33.43
5.10.3.17.2 B1	octresch. Tipple	£. €3 €3 Scope	4-14 W.D	30 60
5.10.3.18.1 🗪	teas 🔻 voltags	\$2 <del>6-3</del> , \$27-7	100.0 ±12.07	03.48 [02.13
5.10.3.18.2 .Og	reas output ripple	Seen on Scope	O.00 ph-ph	140 my 180 my
5.10.4.1 In	put correst telesetry	326-4, 528-2 (528-4 for EDT)		3.749 3.770
5.10.4.2.1 De	ed 1 + volt. telestry	S26-4, <b>52</b> 8-5		3 <u>.747</u> 3.783
5.10.4.2.2 -Ba	ned 1 -	\$28-6		3.735 3.766
5.10.4.3.1	nd 2+	\$28-7		3.707 3,750
5.10.4.3.2	ad 2-	\$28-8		3.698 3 <u>.728</u>
5.10.4.4.1 Ba	nd 3+.	\$28-9		3.7/8 3.732
5.10.4.4.2 Ba	ad 3-	<b>52</b> 8-10		3,720 3.753
5.10.4.5.1 -Ba	md 6+	\$28-11		3.721 3.759
5.10.4.5.2	nd 4-	526-4, 628-12		3.732 3.766
5.10.4.6.1 Ba	nd 5,7+ 💖	526-5, <b>52</b> 8-1		3. <u>684</u> 3.699
5 10.4.5.2	nd 5,7- wolt. colemetry	S26-5, <b>52</b> 8-2		3.683 3.689

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TS 16603 Rev B 18 December 1980

#### 10.4 Performance test (continued)

REF. PARA.	DESCRIPTION	DVM SWITCH POSITIONS L	DHITS		REMENT REDUNDANT
5.10.4.7.1	Band 6 + volt. telemtry	S26-5, S28-3	•	- <u>3691</u>	3724
5.10.4.7.2	Band 6 - 1	S28-4	•	3.725	3.756
5.10.4.8.1	SMA Btr +	S28-5		4.668	4.112
5.10.4.8.2	SMA Etr -	\$28-6		4.126	4.160
5.10.4.9	SMA +7V	\$26-5, \$27-7 (\$27-8 for RDT)	• •	4.980	4.987
5.10.4.10.1	SMA +29V	\$26-5, \$28-9 (\$27-11 for RDT)	٠. ۵.	4.173	4.235
5.10.4.10.2	SMA -29V	\$26-5, \$28-10 (\$27-12 for RDT)	. 9 <i>7</i>	3.770	3.833
5.10.4.11	MUX	S26-6, S28-1		4.794	4.305
5.10.4.12	Radiometer	\$26-6, \$28-2		4.638	4650
5.10.4.13	CDVD	S26-6, S28-3		4.205	4.297
5.10.4.14.1	Analog + volt. telentry	S26-6, S28-4		3.997	4.029
5.10.4.14.2	Analog -	S26-6, S28-5	•	3.737	3.967
.10.4.15	Electronech.	S28-6		4061	4.184
5.10.4.16	Outgas volt. telemetry	\$26-6, \$28 <b>-7</b>		51175	5.105
5.10.5.1.1	Analog + load current	\$26-3, \$27-11 mV : 10	- Amps	15:645 t	N 15.72
5.10.5.1.2	MIX	\$26-3, \$27-12 ±V ÷ 10	□ Amps	41.37	(c) <u>C4. 33</u>
5.10.5.1.3	Pand 1 +	\$26-7, \$34-1 mV ÷ 0.	5 = =4	9674 6	(6) (54-F)
5.10.5.1.4	Band 1 -	S34-2		9/142 12	7)
5.10.5.1.5	2 +	s34-3		90.39	8) 24.339.
5.10.5.1.6	2 -	s34-4		91.22 1	9) <del>91.99</del> 9.
5.10.5.1.7	3 +	S34-5		9/-09 6	<b>a</b> 1 <b>a</b> 3 a
5.10.5.1.8	3 -	s34-6		90.91	91.239
5.10.5.1.9	4 +	S34-7		9613 0	
5.10.5.1.10	4 -	S34-8		90.80	;) <del>91.93</del> ?
5.10.5.1.11	5,7 +	s34 <b>-</b> 9		90.90 (	90.87
5.10.5.1.12	5,7 -	s34-10		80.09 p	s) 9819
5.10.5.1.13	6 +	S 534-11		वयःस	B7.76
5.10.5.1.14	Band 6 -	526-7, 534-12	٠.	47.250	7) 47-64
1.10.5.1.15	574 Htr +	\$26-8, \$34-1 mV ÷ €.	5 = mA .	49.80 ,	0) 48.42
.10.5.1.16	SMA Hrr - load current	\$26-8, \$34-2 mV = mA		- 2983	9,060

TS 16603 Ray B BON-3

**4/3/8/** 

TCU-3

#### 10.4 Performence test (continued)

5.10.5.3.2

Efficienc/

editive mvo REASUREMENT REF. PARA. DESCRIPTION POSITIONS 5.10.5.1.17 SMA +29V lead current \$26-8, \$34-3 av + 0.402 - a4 Sec 22(40) 51.15 5.10.5.1.18 SMA -29V 834-4 TF - 0.402 = MA **Gell (4)** 50.96 5.10.5.1.19 SMA +7V V + C.1 = Amps 723.3 (4) 296.2 268 9 (49 <u>198.2</u> 5.10.5.1.20 Analog -834-6 EF - 0.402 - EA 5.10.5.1.21 Radiometer 534-9 EV + 0.5 = EA 151:59(44) <u>191.9</u>5 5.10.5.1.22 .\$34-10 my + 0.5 - m4 עטעט 269.260 274.4 216.5 KG 212.6 5.10.5.1.23 Electromech. load current S26-8, S34-11 mV + 0.402 = mA 2800 pg 2801 5.10.5.2.1 Bus power supply voltage S26-1, S27-1 (S27-3 for MDT) 12\$53/48/131.14 \$26-1, \$27-2 EV + 10 - Amps 5.10.5.2.2 Bus input current (S27-4 for EDT) **₹2.68¢** 3/732 5.10.5.2.3 PIN (Section 5.10.5) 362.96 5.10.5.2.4 PIN (Section 5.10.3) 362.934 5.10.5.2.5 PIN (avg) 15/41 26-1, 27-2 5.10.5.2.9 Input current at current limit (26-1 27-4 Bat) -27-1 (27-3 ldt) 2775 27.61 Input voltage at current limit 3<u>0.47</u> 26-3, 27-1 30.29 MUX voltage at current limit 52.16 27-12 MUX current at current limit 271.ELG 5.10.5.3.1 Pout **75.**43

>70%

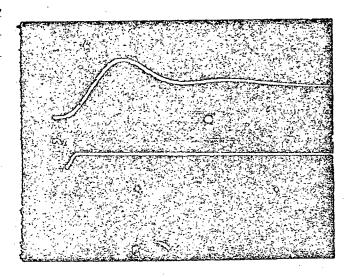


TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

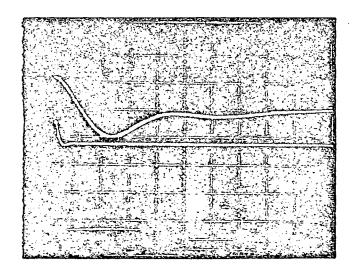
+EB 0 3 1982

ref para	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	meas Primary	UREMENT REDUNDANT
5.10.6.1	+7V output pulsed	S26-2, S27-7 (S27-8 for RDT)	7.10 <u>←</u> 0.80V	7.031	7.161
5.10.6.2	Photograph of transients output voltage as SMA +	induced on input b	us current and Sulse-loaded-PRI	MARY SIDE	



(0.2A) CURRENT/DIV: 2 A A.C.
(IV) VOLTAGE/DIV: 2 V
(200us) SWEEP RATE: 200 More

5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as pulse-load on SMA +7V outputs is being removed - PRIMARY SIDE



(0.ZA) CURRENT/DIV: .2A A.C.
(1W) VOLTAGE/DIV: Z //
(200us) SWEEP RATE: SOO MARKE

TS 16603 Rev B 18 December 1980



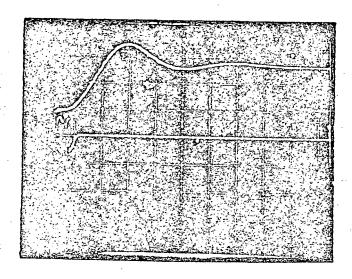
10.4 Performance test (continued)

FFR 0 3 1982

REF. PARA

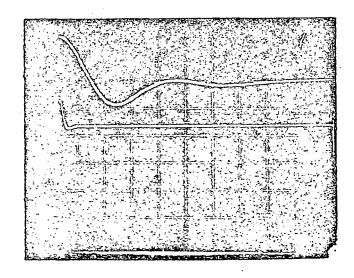
DESCRIPTION

5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V output is being pulse-loaded-REDUNDANT SIDE



(0.2A) CURRENT/DIV: 24 A.C.
(1V) VOLTAGE/DIV: 24
(200us) SWEEP RATE: 500,000

5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as pulse-load is being removed-REDUNDANT SIDE



(0.24) CURRENT/DIV: 24 A.C.
(1V) VOLTAGE/DIV: 2V
(200us) SWEEP RATE: 500 LANC

TS 16603

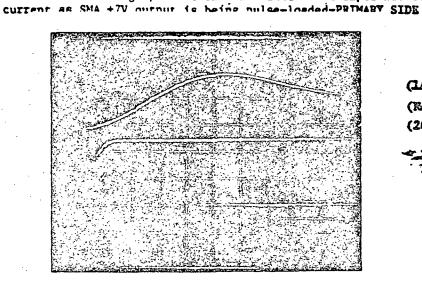
No. 1657

TEST

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#### 10.4 Performance test (continued)

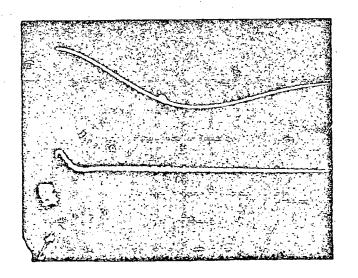
REF PARA	DESCRIPTION	DVH SWITCH	LIMITS		EEDUEDA.
5.10.6.3	Input bus current	\$26-1, \$27-2 (\$27-4 for EDT)		13તન	136.6
5.10.6.4	SMA +7V TM- pulsed	S26-5, S28-7 (S28-8 for RDT)		4.549	4571
5.10.6.5	SMA +7V load current- pulsed	(\$26-8, \$34 <b>-</b> 5		470.6	477.7
5.10.6.6	Photograph of transients	induced on input hus	current and	SMA +7V load	



(14) SMA CURRENT/DIV: 11/ (NA) DUS CURRENT/DIV: 260 MA (20045) SWEEP RATE: 250 MASS

Les et les spart end

5.10.6.6 Photograph of transients induced on input bus current and SMA +7V load current as pulse-load is being removed-PRIMARY SIDE



(1A) = AMA-CURRENT/DIV: AV

(EA) EUR CURRENT/DIV: Z10 & A

(200s) GENERALE: Z00 A

\*Teing D. L. shant and 1000v/Div on Saspe

47



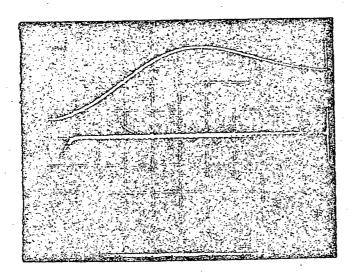
TS 16603 Rev. B <del>16\_Docombox\_1000</del> *ECI-2 P-6-81* 

10.4 Parformence test (continued)

FEB 0 3 1982

REF. PARA. DESCRIPTION

5.10.6.6 Photograph of transients induced on input bus current and SMA + 7V load current as SMA + 7V output is being pulse loaded - REDUNDANT SIDE

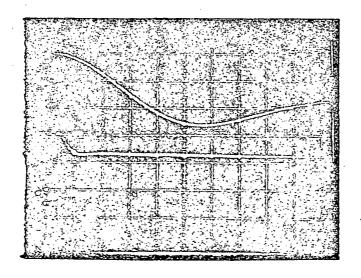


(1A)\* SMA CURRENT/DIV: \*/V

(2A) BUS CURRENT/DIV: % PM PM A

(200us) SWEEP RATE: 2.99 PM

5.10.6.6 Photograph of transients induced on input bus current and SMA + 7V load current as pulse-load is removed - REDUNDANT SIDE



\*Using 0.1 \_\_hunt end 100mV/Div on scope.



TS 16603 Rev B 18 December 1980

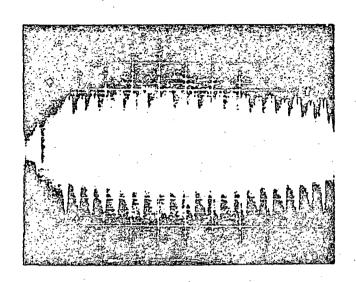
10.4 Performance test (continued)

EF. PARA.

DESCRIPTION

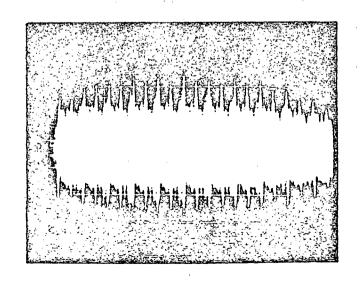
FFB 0 3 1982

j.10.7.1 Photograph of reflected input current ripple - PRIMARY SIDE



(1ma) CURRENT/DIV: 2m A A.(
(10us) SWEEP RATE: 10 Mars

5.10.7.1 Photograph of reflected input current ripple - REDUNDANT SIDE



(1ma) CURRENT/DIV: 2 AA.

(10us) SWEEP RATE: 10 process

5.10.8.1.1 Input current - full load S26-1, S27-2 (S27-4 for RDT)

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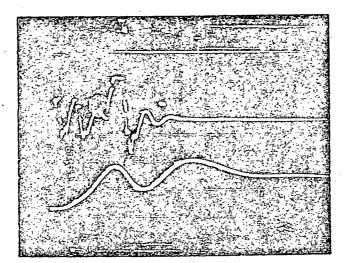
129.46

13.30

5.10.8.1.2 Input current w/o analog Same load

102 54 127.2420037 RElless

5.10.8.1.3 Photograph of transients induced on input bus current and analog + voltage as analog output is enabled - PRIMARY STDE



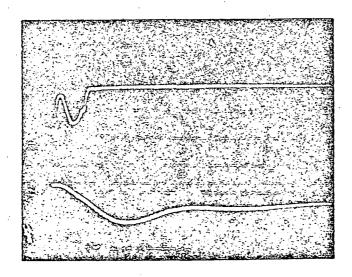
1000 1182

(2V) VOLTAGE/DIV: 2 V

(1A) CURRENT/DIV: (A

(500us) SWEEP RATE: SOOMOR

5.10.8.1.3 Photograph of transients induced on input bus current and analog + voltage as analog output is disabled - PRIMARY SIDE



(5V) VOLTAGE/DIV: 2 U

(1A) CURRENT/DIV: 1A

(1ms) SWEEP RATE: 500 u.s.

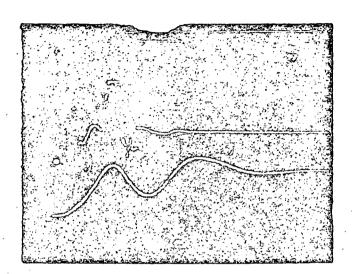
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

REF. PARA

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Photograph of transients induced on imput bus current and amalog + output 5.10.8.1.3 voltage as analog output is enabled - MIDURDANT SIDE.

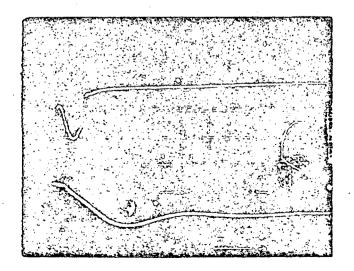


(ZV) VOLINGE/DIV: 2V

(la) CHEEDY DIV: \_\_\_ A\_

(500us) 500 MT : 500 Merce

Photograph of transients induced on imput bus current and analog - output 5.:0.8.1.3 voltage as analog output is disabled - HEDINDANT SIDE.



(5V) VOLTAGE/DIV: 2V

(la) CURRENT/DIV: LA

(lmS) 5-727 MIE: 500

TS 16603 Rev B

18 December 1980

10.4 Performance test (continued)

reg U o 1982 DVM SWITCH POS TTIONS

LIMITS

MEASUREMENT PRIMARY REDUNDAN

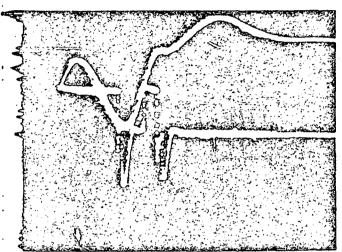
DESCRIPTION Input bus current w/o SMA S26-1, S27-2 5.10.8.2.1 +7V load

F. PARA.

(S27-4 for RDT)

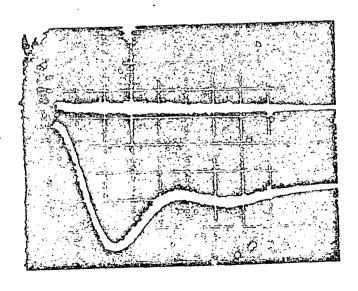
1.18.07

Photograph of transients induced on input bus current and SMA +7V output 5.10.8.2.2 SIDE.



(5V) VOLTAGE/DIV: CURRENT/DIV: (1A) (2000S) SWEEP RATE: 500 floor

5.10.8.2.2 Photograph of transients induced on input bus current and SMA +7V output



woltage as SMA +7V is disabled - PRIMARY SIDE.

**(2V)** VOLTAGE/DIV: = (1A) CURRENT/DIV: \_.2 (2mS)

SWEEP RATE: 500 MC

TS 16603 Rev 7 18 December 19

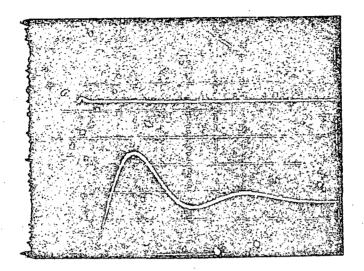
160 0 to 1862

10.4 Performance test (continued)

EF, PARA,

DESCRIPTION

J.10.8.2.2 Photograph of transients induced on input bus current and SMA +7 output voltage as SMA +7V is enabled - REDUNCANT SIDE

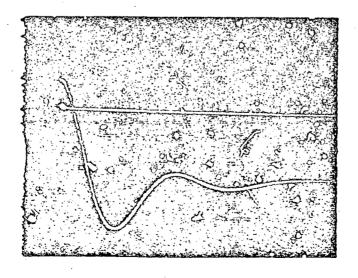


(5V) VCLTAGE/DIV: 24

(1A) CURRENT/DIV: · 24

(200us, SWEEP PATE: 500,000

2.10.8.2.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V is disabled - REDUNDANT SIDE



(2V) VOLTAGE/LIV: 2J

(1A) CURRENT/DIV: .24

(2ms) SHEEP LIE: SOULLE

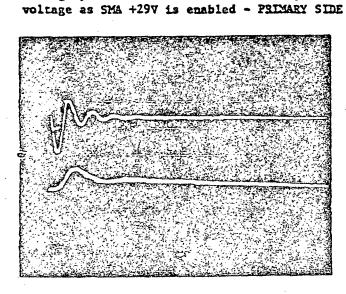
TS 16603 Rev B

18 December 1980

10.4 Performance test (continued)

155 63 1865 (252)

EF. PARA.	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	MEASI PRIMARY	REMENT REDUNDANT
5.10.8.2.3	Input bus current w/o SMA +29V load	S26-1, S27-2 (S27-4 for RDT)		125.64	127.41
5.10.8.2.4	Photograph of transients	•	bus current and	SMA +29V or	itput

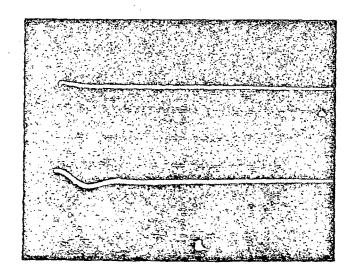


·(2V) VOLTAGE/DIV: 2U

(0.5V) CURRENT/DIV: . 5 9

(lms) Sweep rate: 100 S

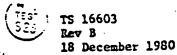
5.10.8.2.4 Photograph of transients induced on input bus current and SMA +29V output voltage as SMA +29V is disabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: 2V

(0.5A) CURRENT/DIV: . SA

(1ms) SWEEP RATE: 1 m S

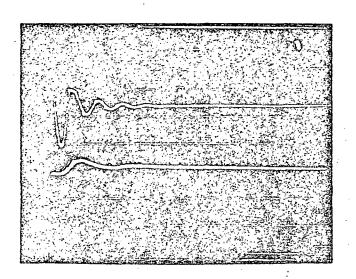


10.4 Performance test (continued)

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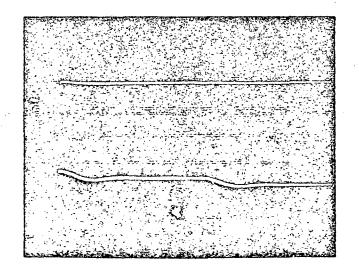
~~	MANA	Support Transform	
Œ.	PARA.	DESCRIPTION	
		والمراب والمناز والمنا	حصصت

j.10.8.2.4 Photograph of transients induced on input bus current and SMA +29V output voltage as SMA +29V is enabled - REDUNDANT SIDE



		hm E
. <u>s</u> ∆)	VOLTACE/DIV:_	
(A.	CORREST/DIV:	
(lms)	SWEEP RATE:	11
•		
		•

5.10.8.2.4 Photograph of transients induced on input bus current and SMA +29V output voltage as +29V is disabled - REDUNDANT SIDE



(2V)	VOLTAGE/DIV:_	SAME.
(0.5)	CURRENT/DIV:_	u
(lmS)	SWEEP RATE:	<u>~</u>
		•

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TS 16603 Rev B

18 December 1980

10.4 Performance test (continued)

EF. PARA DESCRIPTION DVM SWITCH POSITIONS

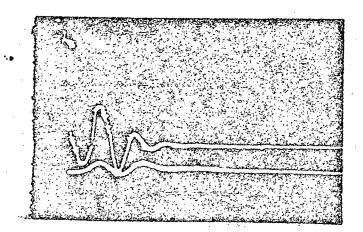
MEASUREMENT REDUNDANT

5.10.8.3.1 Imput bus current W/o CDVU load

S26-1, S27-2 (S27-4 for RDT)

128.79

5.10.8.3.2 Photograph of transients induced on input bus current and CDVU output voltage as CDVU is enabled - PRIMARY SIDE



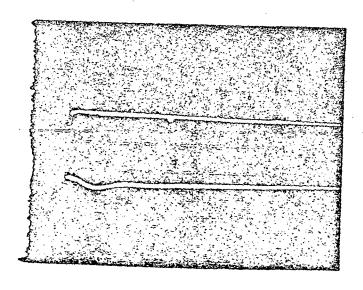
State of the

(2V) VOLTAGE/DIV: ZV

(0.5A) CURRENT/DIV: 5 A

(lmS) SWEEP RATE: / 1995

.10.8.3.2 Photograph of transients induced on input bus current and IDVU output voltage as CDVU is disabled - PRIMARY SIDE



(27)

(0.57)CURRENT/DIV: . S

(lmS) SWEEP RATE: 1001

DESCRIPTION



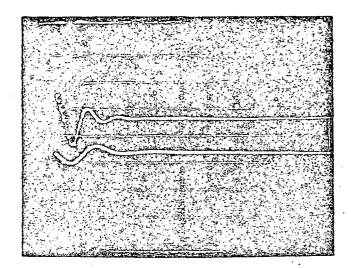
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

F. PARA.

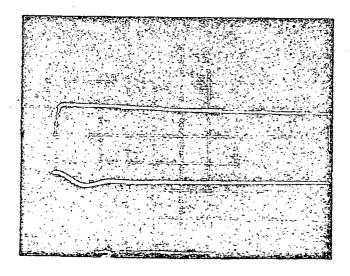
		. (	[ ]4-7
teb	03	1982	(\$\frac{1}{2}\frac{3}{2}

5.10.8.3.2 Photograph of transients induced on input bus current and CDVU output voltage as CDVU is enabled - REDUNDANT SIDE



VOLTAGE/DIV: (2V) (0.5A) CURRENT/DIV:\_\_ (lms) SWEEP RATE:

5.10.8.3.2 Photograph as transients induced on input bus current and CDVU output voltage as CDVU is disabled - REDUNDANT SIDE



VOLTAGE/DIV: (2V) · (0.5A)CURRENT/DIV:\_ (lmS) SWEEP RATE: \_



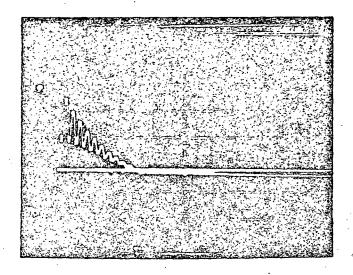
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

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TP. PARA. DESCRIPTION

5.10.9.1 Photograph of turn-off transient of input bus voltage and input bus current as bus voltage is removed - PRIMARY SIDE

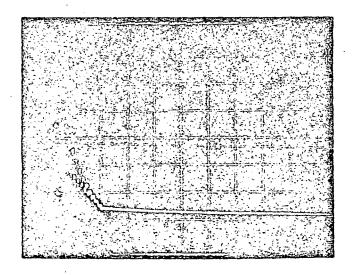


(5y) VOLTAGE/DIV: 5V

(5A) CURRENT/DIV: SA

(500ms) Sweep rate: 500/444

Photograph of turn-off transient of input bus voltage and input bus current as bus voltage is removed - REDUNDANT SIDE



(5V) VOLTACE/DIV: SV
(5A) EMPRENT/DIV: 54

(500us) SWEEP RATE: 1.91 See

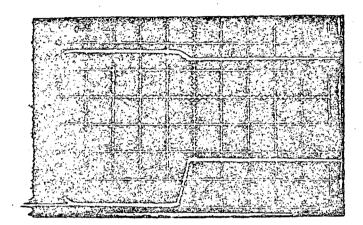


TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

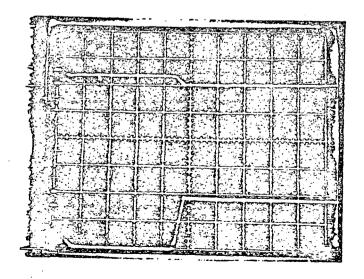
FEB 0 3 1982

AEF PARA	DESCRIPTION	DVM SGITCH POSITIONS	LIMITS	Measu Primary	REMENT REDUNDANT
5.10.9.2	UUT stays off when bus is respplied.	S1-ON (S2-ON for RDT)		<u></u>	
5.10.9.3	Photograph of turn-on trains is issued - PRIMARY SIDE		age and curr	ent as ON comm	and



(5V) VOLIAGE/DIV: 5V (5A) CURRENT/DIV: 5A (100as) SWZEP RATE: 100as

5.10.9.3 Photograph of turn-on transient of bus voltage and current as ON command is issued - REDUNDANT SIDE



(5V) VOLTAGE/DIV: 5 / (5A) CURRENT/DIV: 5 / (100ms) SWEEP RATE: 100

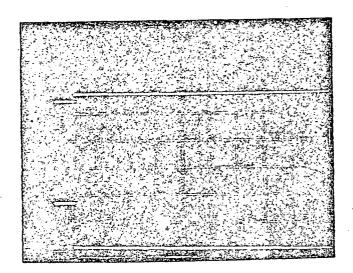
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TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

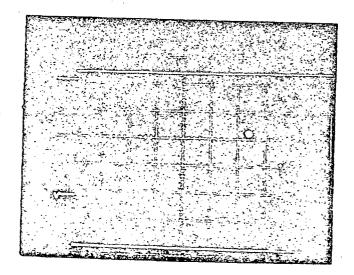
IF. PARA. DESCRIPTION

5.10.9.4 Photograph of turn-off transient of input bus voltage and current as CEF command is issued - PRIMARY SIDE



- (5V) VOLTAGE/DIV: 5 V
- (5A) CURRENT/DIV: SA
- (10ms) SWEEP RATE: 10 M S

5.10.9.4 Photograph of turn-off transient of input bus voltage and current as OFF command is issued - REDUNDANT SIDE



- (5V) VOLTAGE/DIV: \_\_\_\_\_
- (5A) CURRENT/DIV: 5A
- (10ms) SWEEP RATE: 10 m

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2 (FE. 4) SED) TS 16603 Rev B 18 December 1980

	7			•	
REF. PARA.	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	PRIMARY	REDUNDAN
5.10.9.5	Record	827-2 (S27-4)	•	125.51mu	131.34
5.10.9.6	Record	(S27-4 (S27-2)		46.35 mb	20,34
	Record	\$27-2 (\$27-4)			
			• • •	2640-	111.48
5.10.9.7	Record that UUT turns on.	(Checkmark)		1	<u> </u>
5.10.10.1	Input bus current AFTER it reads ~ 17A AND input bus voltage reads ~ 21V.	S26-1, S27-2 (S27-4 for RDI)		139.9am	151.31
5.10.10.2	Input bus voltage with 17.0A load	S26-1, S27-1 (S27-3 for RDT)	. · g-3-82	<u> 28.624</u> R.Ellero	Z8:11
5.10.10.3	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)	4.086	-3. KISH	4455
5.10.10.4	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)	s.11880 /	<u>3:53</u> 2v.	2.54.
	Imput bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)		29.08V	<u>28.0/</u>
	Input bus current	\$26-1, \$27-2 (\$27-4 for RDT)		1 <u>2327</u> A	126.33
5.10.10.5	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)		3.0460	3.056
	Input bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)	••	28.01v	28.00
	Input bus current	S26-1, S27-2 (S27-4 for RDT)		1 <u>63.63</u> mJ	108.82
5.10.10.3	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)		3.570V	2.535
	Input bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)		78.42.V	28.06
	Input bus current	S26-1, S27-2 (S27-4 for RDT)		92,47,00	91.12
5.10.10.7	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)		LABOV	2.069
	Input bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)		28.11	28.83
	Input bus current	S26-1, S27-2 (S27-4 for RDT)		751000	7916
					•

TS 16603 Rev B 18 December 1980

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RFF PARA	DESCRIPTION	DVM SWITTER POSITIONS	LMIN	MEASUREMENT PRIMARY REDUNDAR
5.10.10.8	Imput current talemetry output	S26-4, S28-2 (S28-4 for EDT)		1.536V 1.522
	Imput bus voltage	\$26-1, 527-1 (\$27-3 for EDT)	•	28.61V 28.01
	laput bus carrent	\$26-1, \$27-2 (\$27-4 for RDT)		6048my 61.38
5.10.10.9	Imput current telemetry output	\$26-4, \$28-2 (\$28-4 for RDT)		1.0984 1.0084
	Imput bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)		28.00V 28.02
	Input bus current	\$26-1, \$27-2 (\$27-4 for EDT)		41.28 45.69
5.10.10.10	laput current telemetry	\$26-4, \$28-2 (\$28-4 for RDT)		5168V 5559
	Imput bus voltage	526-1, S27-1 (S27-3 for RDT)		38.86V 25.00
	Input bus carrent	\$26-1, \$27-2 (\$27-4 for RDT)		34.99m 29.95=
5.10.10.11	Imput current telemetry output	S26-4, S28-2 (S26-4 for RDT)		2268
v.	lmput bus voltage .	\$26-1, \$27-1 (\$27-3 for RDT)		29.054 28.50
•	Imput bus current	\$26-1, \$27-2 (\$27-4 for RDT)	•	28.20pl 24.89
5.10.10.22	Isput current telemetry output	\$26-4, \$28-2 (\$28-4 for RDT)		- 28.00 -98.65
;	Imput bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)		28.02
	Input bus current	\$26-1, \$27-2 (\$27-4 for RDT)		11.957/20 12.20
5.10.11.1	Band i- output voltage	\$26-1, \$27-5		23.741 24.74
5.10.11.2	Band 1- ourput voltage	S27-6		- 23.50 -24.25
5.10.11.3	2+	S27-7		24.32 24.03
5.10.11.4	2-	S27 <del>-8</del>		-24.32 -24.68
5.10.11.5	3+	S27-9		25.47 24.5/
5.10.11.6	♥ 3- ♥	S27-10		-23.56 -24.20
5.10.11.7	Band 6+ output voltage	525-1, 527-11		24.21 24.67

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REF. PARA.	DESCRIPTION	DVH SUITCE FOSITIONS	LIMITS	PRINARY	ESPORDAR.
5.10.11.8	Band 4- output voltage	S26-1, S27-12		-23.89	-20.00
5.10.11.9	5,7+	S26-2, S27-1		23.26	24.1
5.10.11.10	5,7-	827-2		- 2 <u>3.20</u>	-23.93
5.10.11.11	6+	<b>327-3</b>		2 <u>29</u> 5	23.84
5.10.11.12	Band 6-	s27-4		- SEHS	-24.07
5.10.11.13	SMA Htr +	S27-5	•	24.61	25.25
5.10.11.14	Htr -	·S27-6		-24.69	-25./;
5.10.11.15	+70	S27-7	•	9.88	n/a
5.10.11	+70	(S27-8 For RDT)	•	N/A	9.358
5.10.11	+29V	S27-9		31.24	N7A.
5.10.11	+29V	(S27-11 For RDT)		N/A	31.62
5.10.11	-29V	S27-10		-31.50	n/a
	SMA -29V	S26-2, (S27-12 for RDT)	J. J. Named	n/a	-31.47
5.10.11.18	Radiometer	S26-3, S27-2		9.391	9.771
5.10.11.19	CDVU	S27-3		9:379	9.265
5.10.11.20	Analog +	S27-4	٠	25.93	26.38
5.10.11.21	Analog -	S27-5		-24.81	-24.81
5.10.11.22	Electromech.	<b>527-6</b>	-t	d1.59	\$2.03
5.10.11.23	Outgas	S27-7		101.25	<u>/eo.</u> 73
5.10.11.24	Parasitic 😾	\$27-9		3 <u>0.81</u>	N/A In
	Parasitic output voltage	S26-3, (S27-10 for RDT)		n/A	31.80
5.10.11.25	Band 1+ TM output	S26-4, S28-5		4.332	4.52¢
5.10.11.26	1-	S28-6		4.346	4.415
5.10.11.27	2+	S28-7	٠	4.424	<u>e.380</u>
5.10.11.28	2-	\$28-8		4.405	<u>4228</u>
5.10.11.29	3+	S28-9		4.633	<u>a.44</u>
5.10.11.30	3-	\$28-10		4.294	4.609
5.10.11.31	. 4+	\$ \$28-11		4.394	4.479
5.10.11.32	4-	S26-4, S28-12		4.340	4.435
5.10.11.33	Band 5,7+ TM output	\$26-5, \$28-1		4.244	4.40

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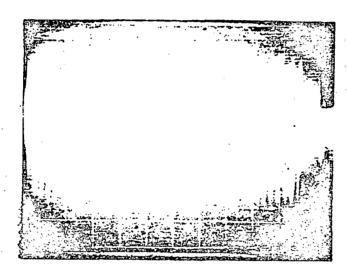
		<del>_</del>			
		-DAR BRILCH			TO CONT
REF PARA	DESCRIPTION	Fositions	LIMITS		REDUEDART
5.10.11.34	Band 5,7- TH output	\$26-5, \$28-2		4230	4360
5.10.11.35	6+	\$28-3		4150	A316
5.10.11.36	Band 6-	<b>528-</b> 4		4277	4.390
5.10.11.37	SMA Htr +	<b>\$28-5</b>	_	4:480	2664
5.10.11.38	Htr -	828-6		4.445	4.54
5.10.11.39	+70	\$28-7 (\$28-8 for RDT)		6.152	5.772
5.10.11.40	+29V	\$28-9 (\$28-11 for RDT)	•	4259	4.338
5.10.11.41	SMA -29V	\$26-5, \$28-10 (\$28-12 for RDT)		3.839	3.84
5.10.11.42	Radiometer	\$26-6, \$28-2		5.086	5.296
5.10.11.43	CDVU	\$28-3		5.194	5.130
5.10.11.44	Analog +	S28-4		4.609	e.6 28
5.10.11.45	Analog -	·: \$28-5	-	4:694	<u>4.275</u>
5.10.11.46	Electromech.	S28-6		5.093	5.137
5.10.11.47	Outges - TH output	S26-6, S28-7		<u> 5.139</u>	5.013
5.10.12.1	Bus voltage	S26-1, S27-1 (S27-3 for RDT)		28.65	25.50
5.10.12.2	Input bus current	\$26-1, \$27-2 (\$27-4 for WDT)	• .	42,2500	42.57
5.10.12.3	SMA Htr + output voltage	\$26-2, \$27-5		21043V	21.77
5.10.12.4	Htr +   ripple	Seem on Scope	-∞30 <b>w</b> V pk-pk	40	40
5.10.12.5	Atr - voltage	526-2, S27-6	•	22.01	-22.38
5.10.12.6	SMA Htr - ripple	Seen on Scope	≪630 wV pk-pk	40	30
5.10.12.7	CDVU voltage	£26-3, \$27-3		7.451	7.668
5.10.12.8	CDVU ripple	Seen on Scope	€240 eV par-fk	60	40
5.10.12.9	Outgas - output voltage	S26-3, S27-7		86.39	86.47v
5.10.12.10	Outgas - output ripple	Seen on Scope	2.50V pk-pk	230 mg	250 FIV
.5.10.12.11	Parasitic output voltage	826-3. S27-9 (S27-10 for RDT)		301031	30.33
5.10.12.12	Parasitic output ripple	Seen on Scope	<900 mV pk-pk	160	180

TS 16603 Rev B

18 December 1980

#### 10.4 Performance test (continued)

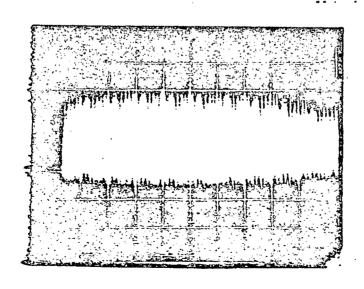
		DAW 2MIICH FER O	3 1982	<u>'</u> ₩₽∧€Т	TREMENT
EF. PARA.	DESCRIPTION	POSITIONS	LIMITS	PRIMARY	REDUNCANT
5.10.13.1	Input current telemetry	S26-4, S28-2 (S28-4 for RDT)		1.05.21	0.99/
5.10.13.2	SMA Htr + output	\$26-5, \$28-5	•	3.911	4.307
5.10.13.3	SMA Htr -	S26-5, S28-6		3. <i>9</i> 43	4.200
5.10.12.4	CDVU	S26-6, S28-3		4.180	4.301
5.10.13.5	Outgas output telemetry	S26-6, S28-7	•	4.315	4.339
5 10 14 1	Photograph of reflected	input current ripol	le in outeas	mode - PRIMAI	RY SIDE



(2mA) CURRENT/DIV: 2 mg KA.C.

10us) sweep rate: 10 10

5:10.14.1 rnotograph of refrected imput current ----- in outgas mode - REDUNDANT SIDE



(2mA) CURRENT/DIV: 2 A.C.

(10us) SWEEP RATE: 10 HALL

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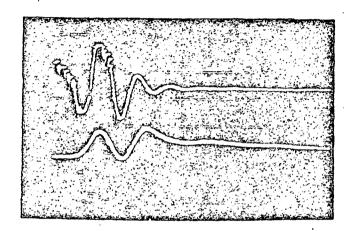


TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

F. PARA	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	MEASUREMENT PRIMARY REDUNDANT
5.10.15.1.1	Input current with CDVU off.	S26-1, S27-2 (S27-4 for RDT)		39.97~ 40.26.

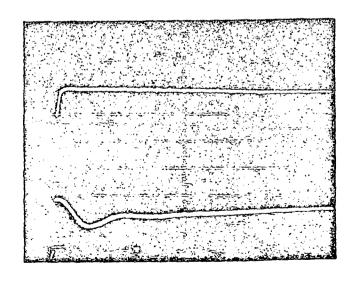
5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is enabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: 2 V
(200mA) CURRENT/DIV: 200 m/B

(1ms) SWEEP RATE: 1 As S

..10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is disabled - PRIMARY SIDE



(2ms) sweep rate: 1ms

TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

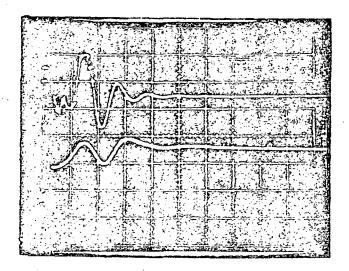
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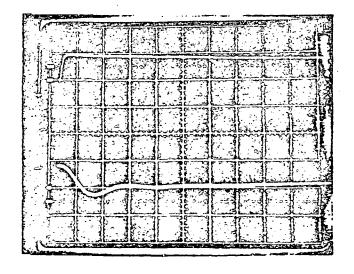
DESCRIPTION

5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is enabled — REDUNDANT SIDE



(200ma) CURRENT/DIV: ...
(1ms) Sweep Rate: ...

5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is disabled — REDUNDANT SIDE



(2V) VOLTAGE/DIV: Same (200mA) CURRENT/DIV: "
(2mS) SWEEP RATE: "

TS 16603 Rev B

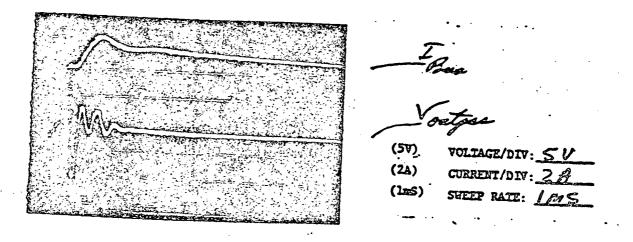
18 December 1980

10.4 Performance test (continued)

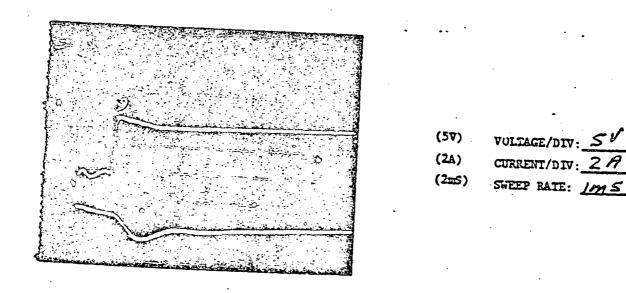
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EF. PARA.	DESCRIPTION	DVH SWITCH POSITIONS	LIMITS	MEASURE PRIMARY R	
5.10.15.2.1	Input bus current with outgas disabled	\$26-1, \$27-2 (\$27-4 for PDE)		141.00	IS.14

5.10.15.2.2 Photograph of input bus current and outgas voltage as outgas load is enabled - PRIMARY SIDE



5.10.15.2.2 Photograph of input bus current and outges voltage as outges load is disabled - PRIMARY SIDE



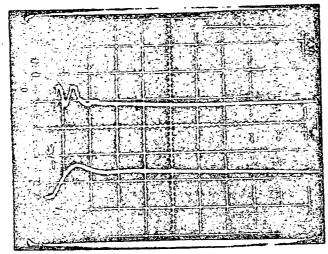
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

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"EF, PARA, DESCRIPTION

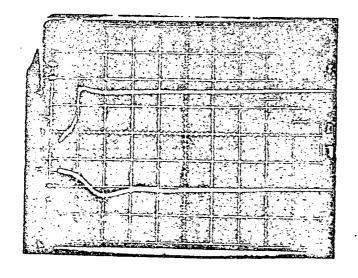
j.10.15.2.2 Photograph of input bus current and outgas voltage as outgas load is enabled - REDUNDANT SIDE



(5V) VOLTAGE/DIV: (2A) CURRENT/DIV: "
(500ms) SHEEP RATE: "

•

5.10.15.2.2 Photograph of input bus current and outgas voltage as cutgas load is disabled - REDUNDANT SIDE



(5V) VOLTAGE/DIV:

(2A) CURRENT/DIV:

(1ms) SWEEP RATE:

REF. PARA.	DESCRIPTION	-DYN SHITCH POSITION	LIMITS	PRIMARY EXPUNDANT
5.10.16.1	BPS voltage	S26-1, S27-1 (S27-3 for EDT)		28.464(49) 23.03
5.10.16.2	BPS current	\$26-1, \$27-2 (\$27-4 for ADT)	•	17.63 by 18.14
5.10.16.3	SMA Htr +output voltage	526-2. 527-5		21.86V (13) 21.82
5.10.16.4	SMA Btr +load current	\$2 <del>6-</del> 6, \$34-1	•	4643 my (38) 47.59
5.10.16.5	SMA Htr -output voltage	S26-2, S27-6		-21.93 (14)-22.26
5.10.16.6	SMA Btr -load current	\$26-8, \$34 <b>-</b> 2		- 8.6 666 (79) - 8.785
5.10.16.7	CDVU output voltage	\$26-3, \$27-3		7.4520 (20) 7.656
5.10.16.8	COVU load current	\$26-8, \$34-10		· 266 y (47) 274.1
5.10.16.9	Parasitic output voltage	\$26-3, \$27-9 (\$27	-10)	30.49 0(23) 30.90
5.10.16.10	Parasitic load current	S26-8, S34-7		142.66 ml (4 6) 168.03
5.10.16.11	Input power (5.10.16.1 x 5.10.16.2)	•,		49.97 50.25
5.10.16.12	Output power ((5.10.16.3 x 5.10.16.4) + (5.10.16.5 x 5.10.16.6 + (5.10.15.7 x 5.10.16.8 + (5.10.16.9 x 5.10.16.1		nt)	16.925 13.52  2"
5.10.16.13	Efficiency ((5.10.16.12) ÷ (5.10.16.11)) x 100%			34.2% 34.5%

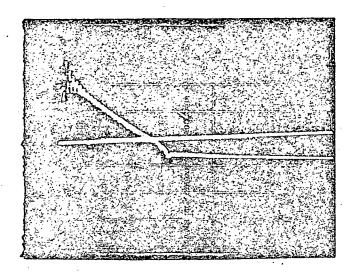


TS 16603 Rev B 18 December 1980

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10.4 Performance test (continued)

5.10.17.1 Photograph of input bus current and input bus voltage as is disable - PRIMARY SIDE

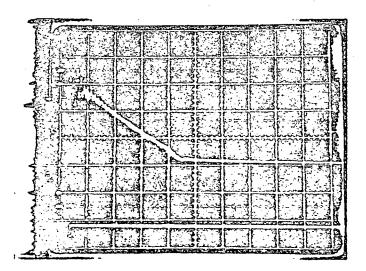


(5V) VOLTAGE/DIV: SV

(2A) CURRENT/DIV: 2/7

(Les) SWEEP RATE: 1MS

5.10.17.1 Photograph of input bus current and input bus voltage as is disabled - REDUNDANT SIDE



(5V) VOLTAGE/DIV: 5V

(2A) CURRENT/DIV: 2.A

(1ms) SWEEP RATE: 1ms

TS 16603 Rev B 18 December1980



10.4 Performance test (continued)

5.10.17.2 Unit stays off (check)

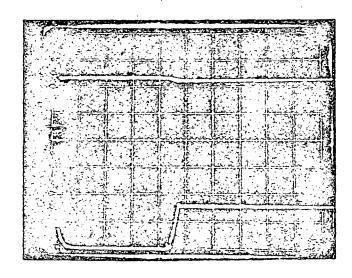
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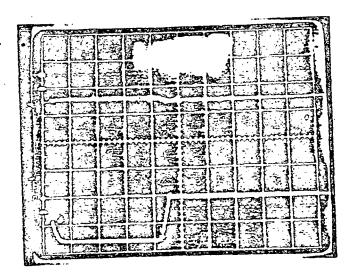
5.10.17.3 Photograph of input bus current and input bus voltage as is enabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: 2V (2A) CURRENT/DIV: 2B

(100ms) SWEEP RATE: 100ms

5.10.17.3 Photograph of input bus current and input bus voltage as as is enabled - REDUNDANT STOR



(2V) VOLTAGE/DIV: 2A (2A) CURRENT/DIV: 2A (100ms) SWEEP RATE: 100 m S

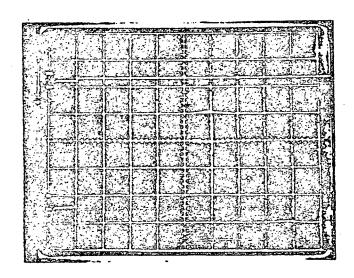
Rev B 18 December 1980

#### 10.4 Performance test (continued)

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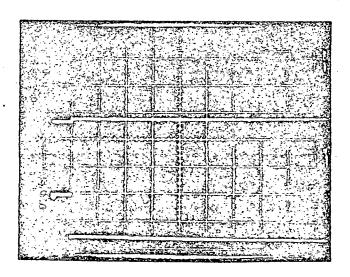
FER OF THE

5.10.17.4 Photograph of input bus current and input bus voltage as is disabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: 2V (2A) CURRENT/DIV: 2F (10ms) SWEEP RATE: 10 2005 5

s in 17 4 whateversh of family his current and input bus voltage



(2V) VOLTAGE/DIV: 5 V (2A) CURRENT/DIV: 2 1 (10ms) SWEEP RATE: 10ms

TEST S23 TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

DVM SWITCH FEB U 3 1982

MEASUREMENT

PRIMARY REDUNDANT

F. PARA. DESCRIPTION

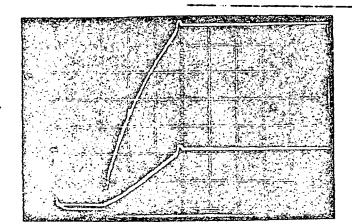
POSITIONS

LIMITS

5.10.17.5 Record that UUT operates correctly.

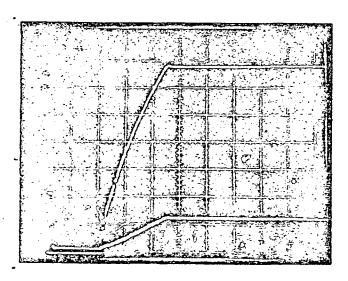
(checkmark)

5.10.18.1 Photograph of input bus current and MUX output voltage as MUX enable command is issued (all loads are ON except outgas) - PRIMARY SIDE



(5V) VOLTAGE/DIV: S 1/
(5A) CURRENT/DIV: S A
(20ms) SWEEP RATE: 20 M 5

5.10.18.2 Photograph of input bus current and parasitic output voltage as parasitic enable command is issued (all loads are ON except outgas) — PRIMARY SIDE



(5V) VOLTAGE/DIV: &U
(5A) CURRENT/DIV: SA
(20mS) SWEEP RATE: 28m S

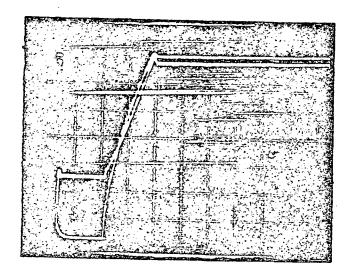
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

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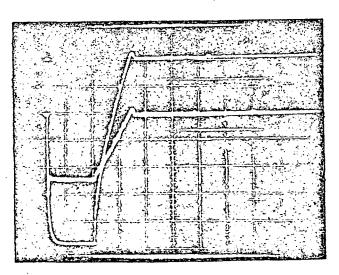
FEB 0 3 1902

.10.18.1 Photograph of input bus current and MUX output voltage as MUX enable command is issued (all loads are ON except outgas) — REDUNDANT SIDE



5V) VOLTAGE/DIV: 5A) CURRENT/DIV: 2A-20ms) SWEEP RATE: 20ms

5.10.18.2 Photograph of input bus current and MUX output voltage as parasitic enable command is issued (all loads are ON except outgas) — REDUNDANT SIDE



(5v) Volts/Div: 5V (5A) Current/Div: 24 (20mS) Sweep Rate: 20

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#### 10.4 Performance test (continued)

EB 0 3 4885

BEF PARA	DESCRIPTION	EDVIN SWITCH	TIMITS	TRIEVEY	REALT REDUNDART
5.10.18.4	-Undervoltage Trip Point (ON/OFF)	-\$26-1, \$27-1 _(\$27-3 for BDT)	18.0 <b>±1.30</b> V	4 <u>4.67</u> 0	18.01
5.10.18.5	UUT atays OFF			1	
5.10.18.6	Undervoltage Trip Point (OFF/ON)	\$26-1, \$27-1 (\$27-3 for RDT)	19.0 ±1.50V	18.92	18.88
5.10.18.7	Overvoltage Trip Point	\$26-1, \$27-1 (\$27-3 for KDT)	38.0 <u>+</u> 27	38.09	39.14 50
5.10.18.8	UUT stays OFF	•		كيو	
5.10.18.9	UUI turns ON			1	1

2-3-82

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RElland & Rody College

Appendix C - Part 3

Power Supply Performance Data

Long Form Test Data



TS 16603 Rev B 18 December 1980

							<del></del> -
10.4	Performance	test - Long	Form				- A
PROTOFILIGHT	DAIA	, OR FLIGHT			s/n 004	_TEMPERATURE	+32°F.
IN-PROCESS_	DNA	, QUAL	DNA		OR ACCEPTANCE	-	
TESTING PHA	SE EMAL	DLD CYC	le .	LI	NE VOLTAGE:	+ 35.0	VOLTS
			DVM SWITC	CH		MEASUR	EMENT
REF. PARA.	DESCRIPT	ION	POSITIONS	-	LIMITS		REDUMDANT
5.10.1.1	Calibrate	cmd gen		•	•	·	
5.10.2.1	Input bus		S26-1, S2	27-2		238 mV	.228 mV
		<b>:.</b> ··	(\$27-4 for redundan		. •		
5.10.2.2	MUX output	vol tage		-	30.0 ±0.907	29.83V	30.09V
5.10.2.3	MUX load c	-	S26-3, S2		. —		33.15~V
•	•	•	_		_		
The rest of	Section 5.1	0.2 require	s only che	cking	voltage - ind	icate by che	ckmarks.
5 10 0 / 1	71		206 1 24				
5.10.2.4.1	B1 + outpu	t voltage					
5.10.2.4.2	B1 -		1	27 <del>-</del> 6 ····	· • •		· <u>·</u>
5.10.2.4.3	B1 -		ł	27-5			-
5.10.2.4.4	B1 +		i	27-7			<del>-</del>
5.10.2.5.1	B2 +		- 1	27-7		<del>-</del>	
5.10.2.5.2	B2 -	j	1	27 <del>-</del> 8			V
5.10.2.5.3	B2 -		1	27-8			
5.10.2.5.4 5.10.2.6.1	B2 + B3 +		<b>}</b>	27-7		<u> </u>	7
5.10.2.6.2			1	279	• •• •	· ·	
5.10.2.6.3	B3 -			27-10			
5.10.2.6.4	B3 -		j,	27-10			
5.10.2.7.1	B3 + 34 +		1	27-9			~
			I '	27-11	• • • • • • • • • • • • • • • • • • • •		4.
5.10.2.7.2 5.10.2.7.3	B4 - B4 -		1	27-12			
5.10.2.7.4		1	•	27-12		<u>~</u>	
5.10.2.7.4	B4 + B5,7+	1	\$26-1, \$2 \$26-2, \$2				<del>-</del>
5.10.2.8.2	B5,7-			•			7
5.10.2.8.3	B5,7~		į	27-2 27-2	•		
5.10.2.8.4	B5,7+		j	27-2 27-1			ー
5.10.2.9.1	B6 +		- 1	27-1 27-3		<u>~</u>	44/4/4
5.10.2.9.2	B6 - output	voltage	S26-2, S2			<del></del>	V Mi
~,-~,m,/,-	10 - 00c <sub>1</sub> /01			., -4		EVIEWE	<b>ب</b> و
			••		· //,	PEVIEWE CACAES G	62/5/3

TS 15603 Rev B 20 December 1550 584-1 1/22/8/

RET DARA	DESCRIPTION	DVM SWITCE POSITIONS	LPIIS	MEASURFMENT PRIMARY REDURBANT
5.10.2.9.3	16 - surput voltage	826-2, S27-4		V -
5.10.2.9.4	55 + carpur voltage	\$26-2, \$27 <b>-3</b>		V V
5.10.2.10.1	SMA ETR + output volt	Eage   S27-5		<u> </u>
5.10.2.10.2	-	S27-6	•	
5.10.2.15.3	-	S27-6	•	
5.10.2.10.4	<b>*</b>	™ 🕅 S27-5		<u> </u>
5.10.2.11.1	+78	s26-2, s27 <b>-</b> 7		
5.10.2.11.2	÷7V	(\$27-8 for RDT)	•	· / <u>V</u>
5.10.2.12.1	+297	\$26-2, \$27 <del>-9</del>		
		(\$27-11 for RDT)	•	
5.10.2.12.2	-29⊽	\$26-2, \$27-10		(2000)
		(S27-12 for RDI)		
5.10.2.12.3	-29₹	\$25-2, \$27-10	•	
5.10.2.12.4	5MA HT9 +29V	526-2, S27- <del>9</del>	•	
5.10.2.13.1	Radiometer	\$26 <b>-</b> 3, \$27 <b>-</b> 2	•	
5.10.2.13.2	Radiometer	\$27-2		
5.10.2.14.1	□ VU	S27-3		1
3.10.2.14.2	COVU	\$27-3		1
5.10.2.15.1	Analog +	527~4		1 4
5.10.2.15.2	analog -	S27-5	•	V V
5.10.2.15.3	Analog	\$27-5		V
5.10.2.15.4	Analog +	S27-4		
5.10.2.16.1	•	S27-6		<u> </u>
5.10.2.16.2	Electromach.	\$27-6		1
5.10.2.17.1		Lage \$26-3, \$27-7		<u> </u>
5.10.3.1	Bus voltage	\$26-1, \$27-1		
		(S27-3 for RDT)		35.03 (49)35.02
5.10.3.2	MUX load current	326-3, \$27-12	4.130 ±0.02	
5.10.3.3	Bus current	\$26-1, \$27-2	_	
		(S27-4 for RDI)		104.38 (50) 107.39
5.10.3.3.2	3PS Volcage	\$26-1, \$27-1 \$27-3)	-	35.014 34.99V
5.10.3.3.3	BPS Current	\$26-1, \$27-2 (\$27-4)	4	107.35
5.10.3.3.4	MIX Current	<b>\$26-3</b> , *\$27-12		41.27 41.45



TS 16603 Rev B 18 December 1980

DEE BARA	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	MEASUREMENT PRIMARY REDUNDA
REF. PARA.	ELSONII IION	100 22 20 110		
5.10.3.4.1	B1 + output voltage	<b>S26-1, S27-5</b>	20.50 ±2.50V	20.45 (1) 20.71
5.10.3.4.2	B1 + output ripple	Look on Scope	≪600 mV pk-pk	<u> 20                                   </u>
5.10.3.4.3	B1 - output voltage	\$26-1, \$27-6	-20.50 ±2.50∀	-20-20-3
5.10.3.4.4	B1 - output ripple	Look on Scope	≪600 mV pk-pk	20 30
5.10.3.5.1	B2 + output voltage	\$26-1, \$27-7	20.50 ±2.50V	20.24 (3) 20.5
5.10.3.5.2	B2 + output ripple	Look on Scope	≪500 mV pk-pk	20 30
5.10.3.5.3	B2 - output voltage	S26-1, S27-8	-20.50 ±2.50V	- 20.27 (4) - 20.5
5.10.3.5.4	B2 - output ripple	Seen on Scope	<600 mV pk-pk	<u> 30                                   </u>
5.10.3.6.1	B3 + output voltage	\$26-1, \$27-9	20.50 <u>+</u> 2.50V	30.28 (5) 20.48
5.10.3.6.2	B3 + output ripple	Seen on Scope	<600_mV pk-pk	
5.10.3.6.3	B3 - output voltage	S26-1, S27-10	-20.50 ±2.50V	-20.24 (5) -20.53
5.10.3.6.4	33 - output ripple	Seen on Scope	≪500 mV pk-pk	20 " 30
5.10.3.7.1	B4 + output voltage	S26-1, S27-11	20.50 ±2.50V	20.42 (7) 20.元
5.10.3.7.2	B4 + output ripple	-Seen-on Scope	≪600 mV pk-pk	
1.10.3.7.3	B4 - output voltage	S26-1, S27-12	-20.50 ±2.50V	-2005 (1) 20.73
5.10.3.7.4	B4 - output ripple	Seen on Scope	≪600 mV pk-pk	<u> 20                                   </u>
5.10.3.8.1	B5,7 + voltage	S26-2, S27-1	20.50 ±2.507	2008 (9) 20.12
5.10.3.8.2	35,7 + ripple	Seen on Scope	≪500 mV pk-pk	<u> </u>
5.10.3.8.3	B5,7 - voltage	:\$26-3, \$27-2	-20.50 +2.50V	-89.99 (10) -20.15
5.10.3.8.4	35,7 - ripple	Seen on Scope	≪500 mV pk-pk	90 0
5.10.3.9.1	B6 + voltage	S26-2, S27-3	20.50 ±2.50V	20.22 (11) 20.43
5.10.3.9.2	B6 + ripple	Seen on Scope	≪500 mV pl-pk	20 20
5.10.3.9.3	E6 - voltage	\$26-2, \$27-4	-20.50 ±2.50V	-20.23 (12) - 20.57
5.10.3.9.4	B6 - ripple	Seen on Scope	<500 mV pk-pk	40 50
5.10.3.10.1	SMA Htr + voltage	\$26-2, <b>\$27-</b> 5	21.20 ±2.12V	22.05 (13) 22.39
5.10.3.10.2	SMA Rtr + ripple	Seen on Scope	≪530 mV pk-pk	20 25-
5.10.3.10.3	SMA Htr - voltage	S26-2, S27-6	-21.20 <u>+</u> 2.12 V	- 22.57 14 22.91
5.10.3.10.4	SMA Htr - ripple	Seen on Scope	<530 mV pk-pk	20 20
5.10.3.11.1		\$26-2, \$27-7 (\$27-8 for RDT)	7.10 ±0.80V	7.67 (15) 7.8/9
5.10.3.11.2	SMA +7V output ripple	Seen on Scope	✓210 mV pk-pk	30 30



Ts 16603 Rev B 18 Dacember 1980

net Para.	DESCRIPTION	Tem Suitch Fusitions	LIMITS PROPARY RECEIPED	ANT
5.10.3.12.1	SPA +29V curput voltage	326-2. 527-9 (\$27-11 for EDT)	29.50 ±1.567 30.61 (16) 30.61	6
5.10.3.12.2	SMA +29V ripple	Seen on Scope	≪70 sv. pk-pk <u>50</u> <u>80</u>	
5.10.3.12.3	SMA -29V voltage	SIS-2, S27-10 (SZ7-12 for TDT)	-29.50 +1.50V - 30.20 (17) 30.6	7
5.10.3.12.4	SMA -29V ripple	Soca ea Scope	470 mV pk-pk 60 ₹0	_
5.10.3.13.1	MIX voltage	<b>326-3, 327-1</b>	30.00 ±0.907 24.63 (13) 30.24	9
5.10.3.13.2	MUX ripple	Seen on Scope	≪00 mV, pk-ph 100 90	
5.10.3.14.1	Radiometer voltage	S26-3, S27-2	* 8.50 ±0.85V 8.34 E (19) 8.43	Lo
5.10.3.14.2	Radiometer ripple	Seen on Scope		
5.10.3.15.1	CDVU voltage	\$2 <del>6-</del> 3, \$27-3	8.00 ±0.807 7.459 6017.65	7
5.10.3.15.2	CDVU ripple	Seen on Scope	240 sv pk-pk 20 30	
5.10.3.16.1	Amalog + voltage	_526-3, <i>5</i> 27-4	21.20 ±2.127 22.12 (2) 22.3	9
5.10.3.16.2	Aralog + ripple	Seen on Scope	430 av pk-pk 50 50	
5,10.3.16.3	Analog - voltage	<b>826-3</b> , <b>827-5</b>	-21.20 ±2.127 - 22.19 (22) - 22.	46
10.3.16.4	Analog - ripple	Seen on Scope	<630 mV pk-pk 20 30	
5.10.3.17.1	Electromach. voltage	\$2 <del>6-</del> 3, \$27 <del>-6</del>	33.40 ±3.347 \$2.67 @3 \$1.4	2
5.10.3.17.2	Electromech. ripple	Seen on Scope	Q.0V pk-pk 40 60	
5.10.3.18.1	Outges 🕏 voltage	S26-3, S27-7	100.0 +12.0V /04.82 V /05.2	
3.10.3.18.2	Ourgas output ripple	Seen on Scope	3.00 pk-pk 200cmV 250cm	~ 4
5.10.4.1	Imput current telestry	526-4, 526-2 (S28-4 for RDT)	2.923 2.945	
5.10.4.2.1	Band 1 + volt. telentry	S26-4, 328-5	3. <u>777</u> 3 <u>.79</u>	,
5.10.4.2.2	And 1 -	328-6	3.7 <u>26</u> 3.780	ı
5.10.4.3.1	Zend 2+	\$28-7	3. <u>685</u> 3. <u>748</u>	>
5.10.4.3.2	-Band 2-	-\$28-8	3.6 <u>76</u> 3 <u>.77</u> 0	<b>)</b>
5.10.4.4.1	Band 3+	S28-9	3. <u>692</u> 3 <u>.77</u> :	2
5.10.4.4.2	Rend 3-	\$28-10	3. <u>695</u> 3. <u>74</u> 9	j .
5.10.4.5.1	Band 4+	\$28-11	3. <u>71</u> 3. <u>77</u> 3	3
5.10.4.5.2	Sand 6-	S26-4, S28-12	3.722 3.779	,
5.10.4.6.1	- Bend 5,7+	S26-5, S28-1	3. <u>646</u> 3. <u>699</u>	
5.10.4.6.2	East 5,7- volt. telesetry	\$26-5, \$28-2	3. <u>646</u> 3.667	-



TS 16603 Rev B 18 December 1980

		DVM SWITCH		Mpasurekent
REF, PARA.	DESCRIPTION	POSITIONS	iniz	PRIMARY REDUNDAN
5.10.4.7.1	Rend 6 + volt. telestry	\$26-5, \$28-3		3662 -2310
5.10.4.7.2	Band 6 -	S28-4	•	3495 3.743
5.10.4.8.1	SMA Etr +	S28-5		4030 4.093
5.10.4.8.2	SMA Htr -	S28-6		4.095 4.185
5.10.4.9	SMA +7V	S26-5, S27-7 (S27-8 for RDT)		4.977 4.913
5.10.4.10.1	SMA +29V	S26-5, S28-9 (S27-11 for RDT)	, • • •	4.43 4.230
5.10.4.10.2	SMA -29V	\$26-5, \$28-10 (\$27-12 for RDT)		3.553 <u>3.555</u>
5.10.4.11	MIX	<b>\$26-6, \$28-1</b>		4.252 4.265
5.10.4.12	Radiometer	S26-6, S28-2		· 4.574 4/519
5.10.4.13	CDVU	<b>s</b> 26-6, <b>s</b> 28-3	•	4.188 4.292
5.10.4.14.1	Analog + volt. telemtry	S26-6, S28-4		3.953 - Kaa3
5.10.4.14.2	Analog -	S26-6, S28-5	. •••	3908 3.941
.10.4.15	Electromech.	s28-6		4036-4.103
5.10.4.16	Outgas volt. telemetry	S26-6, S28-7		5.24 5759
5.10.5.1.1	Analog + load current	S26-3, S27-11 mV ÷	10 = Ашра	15.000 mls.65
5.10.5.1.2	MIX	\$26-3, \$27-12 mV ÷	10 = Amps	20.28 0511.45
5.10.5.1.3	Eand 1 +	\$26-7, \$34-1 mV ÷	0.5 = mA	90.77 no 92.21
5.10.5.1.4	Band 1 -	\$34-2		-91.11
5.10.5.1.5	2 +	s34-3	• •	25.20 W. 11.20
5.10.5.1.6	2 -	s34-4		- 90.65 m. 12.5
5.10.5.1.7	3 +	\$34-5		80.01 (co) 91.25
5.10.5.1.8	3 -	s34-6		-90.25 01-91.62
5.10.5.1.9	4 +	S34-7		90.86 00) 92.30
5.10.5.1.10	4 -	\$34-8		- 90.53 (1) - 9/9:
5.10.5.1.11	5,7 +	s34 <b>-</b> 9		87.77 (4) 905
5.10.5.1.12	5,7 -	S34-10		- 89.13 (u) - 97.8°
5.10.5.1.13	6 +	▼ s34-11		46.99 (16) 47.59
5.10.5.1.14	Band 6 -	\$26-7, \$34-12		- 46.71 07 47.4
3.10.5.1.15	SMA Htr + W	\$26-8, \$34-1 mV ÷	0.5 = mA	47.51 0e) 48.2:
5.10.5.1.16	SMA Htr - load current	\$26-8, \$34-2 mV =	<b>mA</b> .	- 8.911 m- 9.64



TS 16603 Rev B

CN-2 7-1-81 CN-3 4/3/81

				1.7-
REF. PARA,	DESCRIPTION	POSITIONS	LIMITS	HEASUREMENT PRIMARY REDUNDA
5,10.5.1.17	SMA +29V load current	S26-8, S34-3 20♥	÷ 0.402 = mA	50.39 (40) 5/.19
5.10.5.1.18	SMA -29V	S34-4 BV	÷ 0.402 = mA =	50.19 (4)-80.9
5.10_5.1.19	SMA +7V	534-5 ₹	÷ 0.1 - Amps	2808 (49.5%)
5.10.5.1.20	Analog -	534-6 mV	÷ 0.402 = mA =	265.7 (43-26"
5.10.5.1.21	Radiometer	\$34-9 m₹	÷ 0.5 = mA	149.45 (4) 150.5
5.10.5.1.22	CDVU 4	\$ \$34-10 EV	+ 0.5 = mA	267.1 65274
5.10.5.1.23	Electromech, load current	S26-8, S34-11 mV	÷ 0.402 = mA	209.2 (46)212.
5.10.5.2.1	Bus power supply voltage	S26-1, S27-1 (S27-3 for RDT)		35.80 PT 35.6
5.10.5.2.2	Bus input current	\$26-1, \$27-2 mV (\$27-4 for RDT)	÷ 10 = Amps	18235(49) (07.1
5.10.5.2.3	PIN (Section 5.10.5)			36 cm 5 375.
5.10.5.2.4	P <sub>IN</sub> (Section 5.10.3)			365.643 376.0
5.10.5.2.5	PIN (EVE)			368.434 8355
5.10.5.2.9	Input current at current l	limit	26-1, 27-2 (26-1 27-4 Rde)	1120 126
	Input voltage at correct l	limit	27-1 (27-3 Rde)	3483 84.8
	MUX voltage at current lim	ait	26-3, 27-1	3027 v. 30.11
	MOX current at current lis	nit	27-12	50.35 AN 54.0
5.10.5.3.1	Pour			267.602 274.6
5.10.5.3.2	Efficiency		> 70%	73.72 73.4

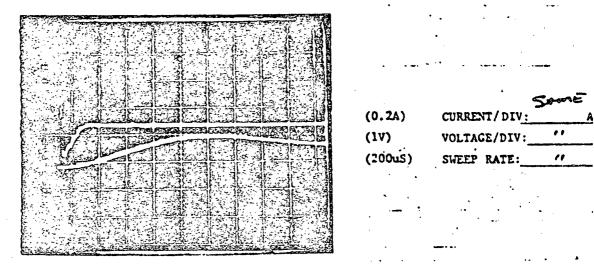


TS 16603 Rev B 18 December 1980

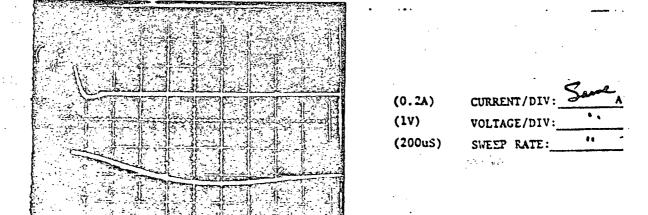
10.4 Performance test (continued)

EF. PARA.	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	 UREMENT REDUND
5.10.6.1	+7V output pulsed	\$26-2, \$27-7 (\$27-8 for RDT)	7.10 ±0.80V	7.19

5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V output is being pulse-loaded-PRIMARY SIDE



5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as pulse-load on SMA +7V outputs is being removed - PRIMARY SIDE





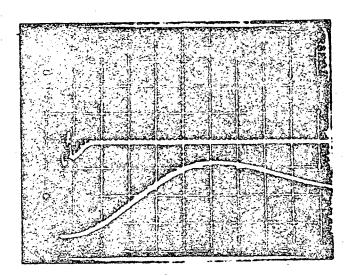
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

REF. PARA

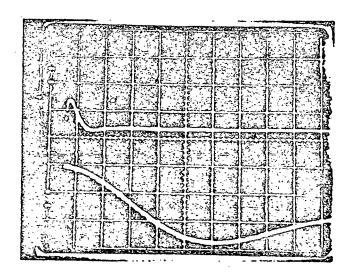
DESCRIPTION

5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V output is being pulse-loaded-REDUNDANT SIDE



(0.2A) CURRENT/DIV: D.Z. 1
(1V) VOLIACE/DIV: Z. J. 1
(200us) SWEEP RATE: Z. J. 6

5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as pulse-load is being removed-REDUNDANT SIDE



(0.2A) CURRENT/DIV: 0.24/ (1V) VOLTAGE/DIV: Z. W/AM (200us) SWEEP RATE: Z.O.

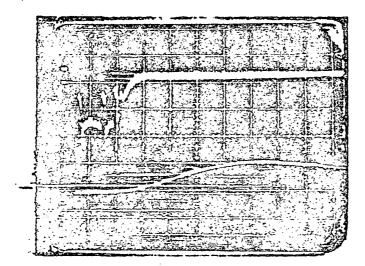


TS 16603 Rev B 26 December 1000 SG#2 P4-91

#### 10.4 Performance test (continued)

REF. PARA.	DESCRIPTION	DVH SWITCE POSITIONS	LEGIS	MASURIOPHI PETRALI ELDUNDA
5.10.6.3	Input bus current	826-1, S27-2 (827-4 for EDT)		169.67 111.82
5.10.6.4	SMA +7V IM- pulsed	\$26-5, \$28-7 (\$28-8 for RDT)	·	4.551 4.695
5.10.6.5	SMA +7V load current- pulsed	(\$26-8, \$34-5)		472.2 at 483.4

5.10.6.6 Photograph of transients induced on input has current and SMA +7V load current as SMA +7V output is being pulse-loaded-PRIMARY SIES



(LA) SMA CURRENT/DIV: ./V

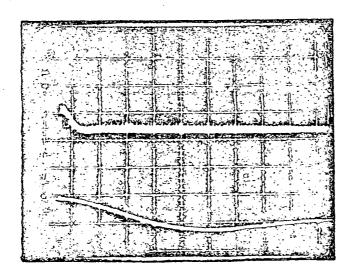
(RM) BUS CURRENT/DIV: Z000000

(200000S) SWEEP RAIE: Z6000000

Busing 0.1 \_\_ shoot and

100 rv/Div on scope

current as pulse-load is being removed-PRIMARY SIDE



There's on Scope



TS 16603 Rev B <del>15 December 1930</del> *SCI-E F-6-81* 

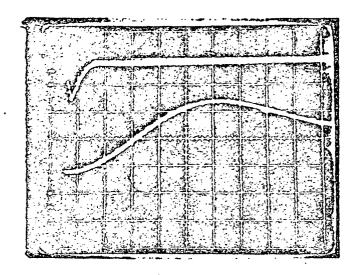
10.6 Performance test (continued)

REP. PARA

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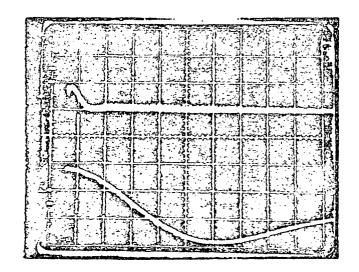
DESCRIPTION

5.10.6.6 Photograph of transients induced on input bus current and SHA + 7V load current as SHA + 7V output is being pulse loaded - REDUNDANT SIDE



Using 0.1 -- chust and 100 mW/Div on acces.

5.10.6.6 Photograph of transients induced on input bus current and SMA + 7V load current as pulse-load is removed - REDUNDANT SIDE



(1A) \* SMA CURRENT/DIV: 100 V/6 (2A) BUS CURRENT/DIV: 3.2 A/DIV (200us) Sweep Bate: 200/164,



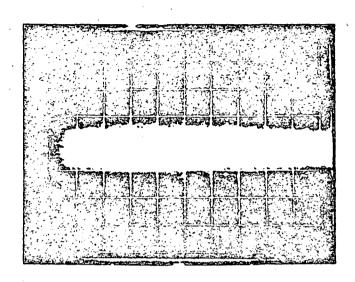
TS 16003 Rev B 18 December 1980

10.4 Performance test (continued) .

EF, PARA

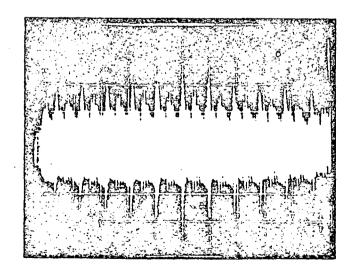
DESCRIPTION

5.10.7.1 Photograph of reflected input current ripple - PRIMARY SIDE



(1ma) CURRENT/DIV: JOS A.C.
(10us) Sweep RATE: 90-2016

5.10.7.1 Photograph of reflected input current ripple - REDUNDANT SIDE



- 5.10.8.1.1 Input current full load S26-1, S27-2 (S27-4 for RDT)
- 5.10.8.1.2 Input current w/o analog Same

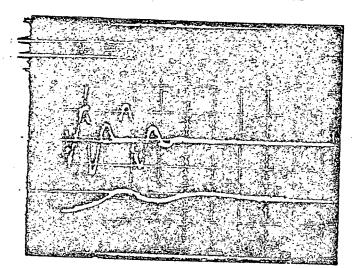


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164.26

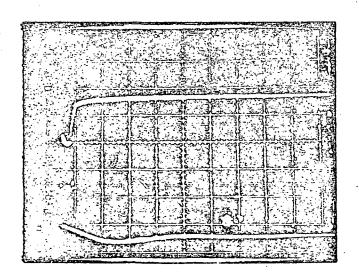
66.

5.10.8.1.3 Those graph of transients induced on input bus current and analog + voltage : analog output is enabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: 1'
(1A) CURRENT/DIV: 1'
(500ms) SWEEP RAIZ: 11

5.10.8.1.3 Photograph of transients induced on input bus current and analog + voltage as analog output is disabled - PRIMARY SIDE



(SV) VOLTAGE/DIV: (°.

(1A) CURRENT/DIV: ..

(1ms) SWEEP RATE: ..

ORIGINAL PAGE IS OF POOR QUALITY



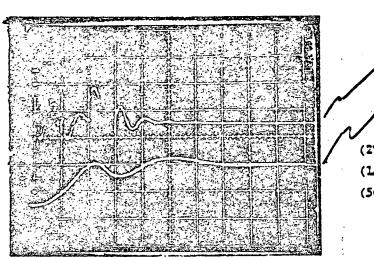
T5 16603 Ray B 18 December 1980

10.4 Performance test (continued)

RYT. PARA

DESCRIPTION

5.10.8.1.3 Photograph of transients induced on imput bus current and analog + output voltage as enalog output is enabled - REDURDANT SIDE.

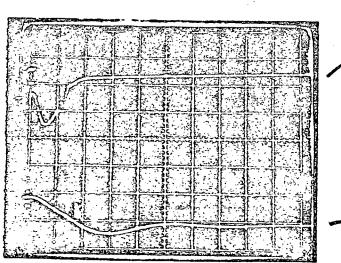


August our purty

(2V) VOLDAGE/DIV: 2V/B

(1A) CURRENT/DIV: 1/A/A/
(500us) Sues Base: 500/6/

5.10.8.1.3 Photograph of transients induced on input bus current and analog - output voltage as enalog output is disabled - REDUNDANT SIDE.



ANDERS POUTPUTV

(SV) VOLIMEZ/DIV: ZY/DI

(1A) CURRENT/DIV:

(les) sate mit: Dogat/

~ BOSI

TEST S30 TS 16603 Rev B

18 December 1980

10.4 Performance test (continued)

EF. PARA. DESCRIPTION

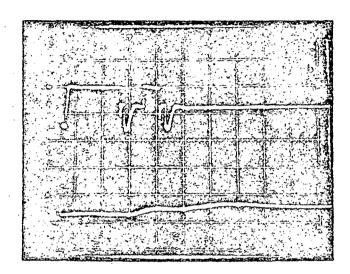
DVM SWITCH POSITIONS

LIMITS

MEASUREMENT PRIMARY REDUNDA

5.10.8.2.1 Input bus current w/o SMA S26-1, S27-2 +7V load (S27-4 for RDT) 95.06 93

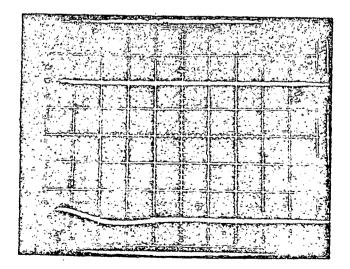
5.10.8.2.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V is enabled - PRIMARY SIDE.



(5V) VOLTAGE/DIV: 5V
(1A) CURRENT/DIV: 1A

(200as) SWEEP BATE: SOCIETA

5.10.8.2.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V is disabled - PRIMARY SIDE.



(2V) VOLTAGE/DIV: 5J

(1A) CURRENT/DIV: /A

(2005) SHEEP RATE: 500



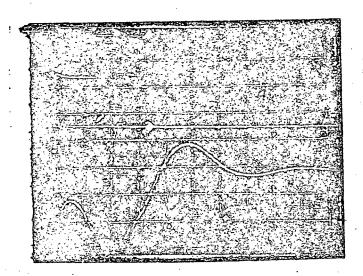
TS 16603 Rev B 18 December 198

10.4 Performance test (continued)

EF, PARA

DESCRIPTION

5.10.8.2.2 Photograph of transients induced on input bus current and SMA +7 output voltage as SMA +7V is enabled - REDUNDANT SIDE

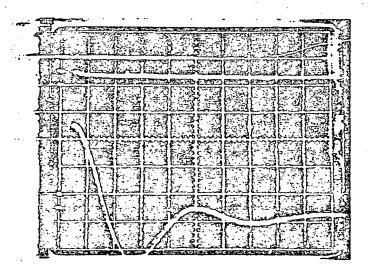


(5V) VOLTAGE/DIV: 2V/E/ (1A) CURRENT/DIV: 0.24/2/

(205us) SWEET RATE: SBAGS

500

5.10.8.2.2 Photograph of transferrs induced on input bus current and SMA +7V output voltage as SMA +7V is disabled - REDUNDANT SIDE



(2V)

VOLTAGE/DIV: 2V

(1A)

CURRENT/DIV: 0.2A

(305)

SWEEP RATE: 500 AL

500/00



TS 16603 Rev B 18 December 19

10.4 Performance test (continued)

DESCRIPTION

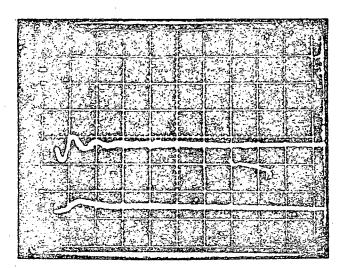
DVM SWITCH		MEASU	REMENT
POSITIONS	LIMITS	PRIMARY	REDUNI

Input bus current w/o 5.10.8.2.3 SMA +29V load

EF. PARA.

S26-1, S27-2 (S27-4 for ROT) 101.18 103

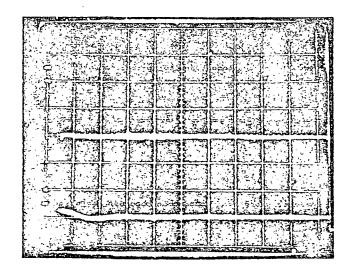
Photograph of transients induced on input bus current and SMA +29V output 5.10.8.2.4 voltage as SMA +29V is enabled - PRIMARY SIDE



· (2V) VOLTAGE/DIV:\_ (0.54) CURRENT/DIV:\_

SWEEP RATE:

Photograph of transients induced on input bus current and SMA +297 output 5.10.8.2.4 voltage as SMA +29V is disabled - PRIMARY SIDE



(2V) VOLTAGE/DIV:\_ (0.5A) CURRENT/DIV:\_\_ (1mS) SWEEP RATE:



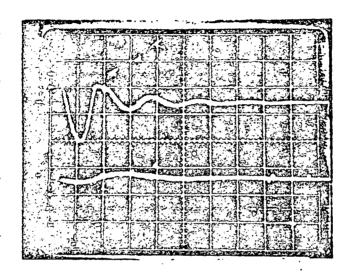
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

OF. PARA.

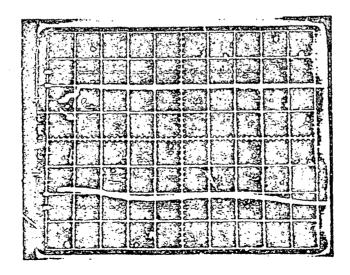
DESCRIPTION

5.10.8.2.4 Photograph of transients induced on input bus current a. SMA +29V output voltage as SMA +29V is enabled - REDUNDANT SIDE



(2V) VOLTAGE/UN Z V AND (0.5A) CURPENT AVE S A SE

5.10.8.2.4 Photograph of transients induced on input bus current and SMA +29V output voltage as ±29V is disabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: 2V (0.5) CURRENT/D.V: \$5A

(1ms) SWEEP RATE: SOOAS



TS 16603 Rev B

18 December 198

10.4 Performance test (continued)

DVH SWITCH EN PARA. DESCRIPTION POSITIONS

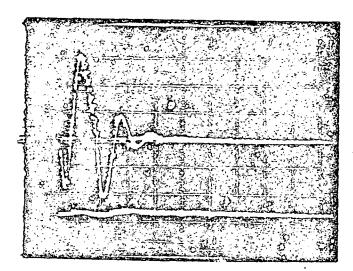
MEASUREMENT

5.10.8.3.1 Input bus current

w/o CDVU load

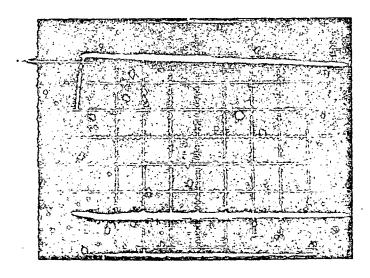
S26-1, S27-2 (\$27-4 for RDT)

5.10.8.3.2 Photograph of transients induced on input bus current and CDVU output



**VOLTAGE/DIV** 

.10.8.3.2 Photograph of transients induced on input bus current and CDVU output voltage as CDVU is disabled - PRIMARY SIDE



SWEEP RATE:



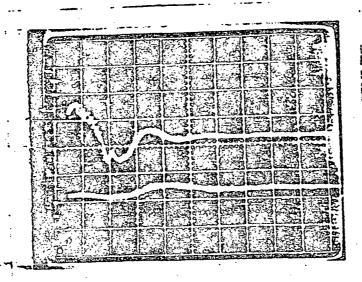
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

C.

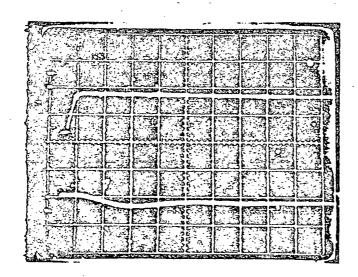
LP PARA, DESCRIPTION

5.10.8.3.2 Photograph of transients induced on input bus current and CDVU output voltage as CDVU is enabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: 21 (0.5A) CURRENT/DIV: 0.5A (LES) SWEEP RATE: SDRAW (DI

5.10.8.3.2 Photograph as transients induced on input bus current and CDVU output voltage as CDVU is disabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: 2V (0.5A) CURRENT/DIV: 0.5A (1ms) SWEEP RATE: SCOAS DIV

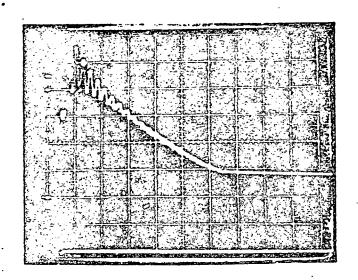
TEST S 30

TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

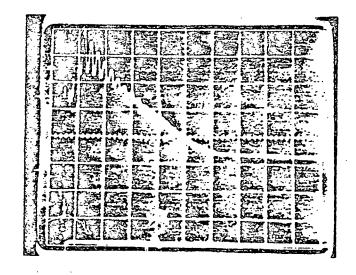
'EF. PARA. DESCRIPTION

5.10.9.1 Photograph of turn-off transient of input bus voltage and input bus current as bus voltage is removed - PRIMARY SIDE



(5V) VOLTAGE/DIV: 1: (5A) SURRENT/DIV: 1: (50QuS) STREEP PATE: 1:

Photograph of turn-off transient of input bus voltage and input bus current as bus voltage is removed - REDUNDANT SIDE



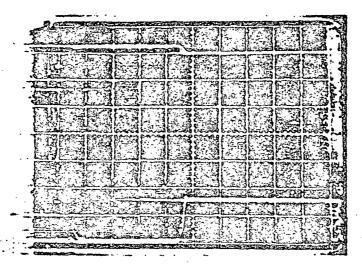
(5V) VOLTAGE/DIV: 5V (5A) CURRENT/DIV: 5A (500us) SWEEP RATE: 50045.

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TS 16603 Rev B 18 December 1980

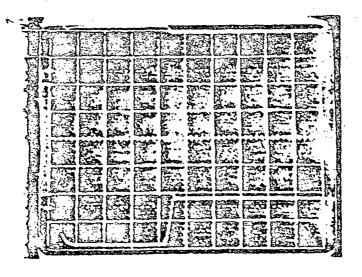
#### 10.4 Performance test (continued)

		DVM SWITCH	·	MEAST	UREMENT .
REF. PARA.	DESCRIPTION	POSITIONS	TIMITS	PRIMARY	REDUNDANT
5.10.9.2	UUT stays off when bus is reapplied.	S1-ON (S2-ON for RDT)		_	
5.10.9.3	Photograph of turn-on tra is issued - PRIMARY SIDE	ensient of bus vol	tage and curren	t as ON com	busid



(5W) VOLTAGE/DIV: (5A) CURRENT/DIV: (10005) SHEEP RATE:

5.10.9.3 Photograph of turn-on transient of bus voltage and current as ON command is issued - REDUNDANT SIDE



(5V) VOLTAGE/DIV: 5V

(5A) CURRENT/DIV: 5A.

(100ms) SWEEP RATE: DOSS

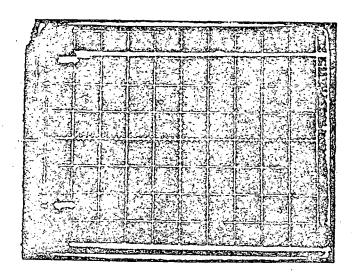


TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

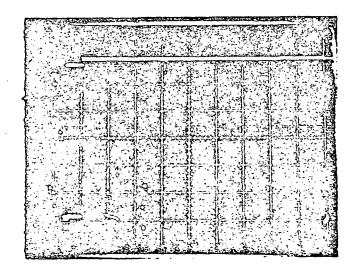
EF.	PARA.	DESCRIPTION
<u> 37 .</u>	PARA.	UCCUTAL FACTOR

5.10.9.4 Photograph of turn-off transient of input bus voltage and current as OFF command is issued - PRIMARY SIDE



(5V) VOLTAGE/DIV: [ 1 (5A) CURRENT/DIV: 1 (10ms) SWEEP RATE: 1 (10ms)

5.10.9.4 Photograph of turn-off transient of input bus voltage and current as OFF command is issued - REDUNDANT SIDE



(5V) VOLTAGE/DIV: 5V (5A) CURRENT/DIV: 5A (10ms) SWEEP RATE: Day See



TS.16603 Rev B 18 December 198

REF. PAPA,	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	PRIMARY	REDUND
5.10.9.5	Record			187.08	1071
5.10.9.6	Record	\$27-2 (\$27-4) (\$27-4 (\$27-2)	•	87.35	·, • <del>• • • • • • • • • • • • • • • • • •</del>
	Record	S27-2 (S27-4)		May, Campillation	* <u>inclusion</u>
				24.29	886
_					سه ر
5.10.9.7	Record that UUT turns on.				
5.10.10.1	Input bus current AFTER it reads ~ 17A AND input bus voltage reads ~ 21V.	\$26-1, \$27-2 (\$27-4 for RDT)		120.50	120.3
5.10.10.2	Input bus voltage with 17.0A load	\$26-1, \$27-1 (\$27-3 for RDT)	• • •	35.03	34.9
5.10.10.3	Input current telemetry output	\$26-4, \$28-2 (\$28-4 for RDT)	•	-3356	2234
5.10.10.4	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)		= DAG	-Drift
	Input bus voltage	S26-1, S27-1 (S27-3 for RDT)		DNA	EVA.
	Input bus current	S26-1, S27-2 (S27-4 for RDT)		Del A	DAA
5.10.10.5	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)		3.012	3.04
	Input bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)	••	. 35.05	35.0
	Input bus current	\$26-1, \$27-2 (\$27-4 for RDT)		108.97	1/0.0
5.10.10.6	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)		2.524	2 <u>54</u>
	Input bus voltage	S26-1, S27-1 (S27-3 for RDT)		35.87	3 <u>5.0'</u>
•	Input bus current	S26-1, S27-2 (S27-4 for RDT)		94.72	96.01
5.10.10.7	Input current telemetry output	\$26-4, \$28-2 (\$28-4 for RDT)	·	2.010	Zo
	Input bus voltage	S26-1, S27-1 (S27-3 for RDT)		34.96	35.1
	Input bus current	\$26-1, \$27-2 (\$27-4 for RDT)		83.26	77



TS 16603 Rev B 18 December 1980

#### 10.4 Performance test (continued)

5.10.11.7

Bend 4+ output voltage

10.4	Performance test (continue	<u>0</u>	क्टि ३ उच्छ	
REF. PARA.	DESCRIPTION	DVM SWITCE POSITIONS	LIKTE	MEASUREMENT PRIMARY REDUNDANT
5.10.10.8	Imput current telementy	\$25-4, \$25-2 (\$25-4 for RDT)	•	1.497 1.4865
	Input bus volinge	526-1, 527-1 (527-3 for EDT)		3 <u>5.0/</u> 3 <u>5.0</u> 2
	Input bus current	\$26-1, \$27-2 (\$27-4 for RDT)		6324mV 59.88
5.10.10.9	Input current telemetry	\$26-4, \$28-2 (\$28-4 for RDI)		1.0092 0.9392
	Impu: bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)		3 <u>5.00</u> 3 <u>5.0</u> 2
	Imput bus current	\$26-1, \$27-2 (\$27-4 for EDT)		41.22 \$ 42.46
5.10.10.10	Imput current telementy	\$26-4, \$28-2 (\$28-4 for RDT)		.598W 0.4824
	Imput bus voltage	\$26-1, \$27-1 (\$27-3 for EDX)		34.99 25.00
·	input bus current	\$26-1, \$27-2 (\$27-4 for KDT)		32.06-V27.75-V
5.10.10.11	Supur current relementy output	526-4, S28-2 (S28-4 for RDT)		.2215 0.2360
:	Imput bus voltage	\$26-1, \$27-1 (\$27-3 for RDY)		34.99 35.02
	"Input bus current	\$26-1,_\$27-2 (\$27-4 for RDT)	•	2 <u>5.3/</u> 2 <u>5.88</u>
5.10.10.12	Imput current telemetry	\$26-4, \$28-2 (\$28-4 for RDT)		-2 <u>20.7</u> - 242.2
	Imput bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)		35.03 <u>35.0</u> 3
	Input bus correct	\$26-1, \$27-2 (\$27-4 for RDT)		13.588 11.095 V
5.10.11.1	Bend 1+ output voltage	\$26-1, \$27-5		24.13 24.76
5.10.11.2	Rend 1- output voltage	S27-6		-24.13 - 24.15
5.10.11.3	1 2+	S27-7	•	2 <u>4.40</u> 23.80
5.10.11.4	2-	S27-8		-24.40 -24.30
5.10.11.5	3+	\$27 <del>-9</del>		25.91 24.31
5.10.11.6	🔻 3- 🐬	\$ \$27-10		-23.36 - 23.98

526-1, 527-11



#### TS 16603 Rev B 35 December 1986 Std. 2 \$2.698

		187:87			•		
2000 0404	92609 1997AV	DVH SHITCH	LDUTS		REMENT		
REP PARA	DESCRIPTION	POSITIONS	riniis	PRIMARY	REDURDAR		
5.10.11.8	Band 4- output voltage	S26-1, S27-12		-2428	-24.25		
5.10.11.9	5,7+	826-2, 527-1	•	28 <u>35</u>	23.92		
5.10.11.10	5,7-	827-2		- 23 <u>.30</u>	- 2 <u>3.68</u>		
5.10.11.11	6+	S27-3		22.90	23.57		
5.10.11.12	Band 6-	S27 <i>-</i> -4		-23.5%	- 2 <u>3.87</u>		
5.10.11.13	SMA Htr +	S27-5	•	24.60	25.03		
5.10.11.14	Htr -	-S27 <b>-</b> 6		-24.60	-2490		
5.10.11.15	+7V	S27-7		17,5061	N/A		
5.10.11	+70	(S27-8 For RDT)		n/a	11.4324		
5.10.11	+29V	S27-9		31.24V	N/A		
5.10.11	+29V	(S27-11 For RDT)		n/a	31.421		
5.10.11	₩ -29V	S27-I0		-31.50	N/A		
	SMA -29V	\$26-2, (\$27-12 for RDT)		H/A	-3 <u>1.28</u> y		
5.10.11.18	Rediometer	\$26-3, \$27 <i>-</i> 2		9.442	<u>9.713</u>		
5.10.11.19	CDVU	\$27-3		9.647	9.547		
5.10.11.20	Analog +	<b>527-4</b>		26.38	2 <u>6.66</u>		
5.10.11.21	Analog -	S27-5		-24.97	- 24.78		
5.10.11.22	Electromech.	S27-6	•	44.55	44.07		
5.10.11.23	Outgas	<b>S27-7</b>		103.08V	101.31		
5.10.11.24	Parasitic -	S27-9		30.£7y	N/A		
	Paraeitic output voltage	S26-3, (S27-10 for RDT)		n/a	31.64V		
5.10.11.25	Band 1+ TM output	S26-4, S28-5		4,02	4.52.7		
5.10.11.26	1-	S28-6		<u>e.429</u>	4.395		
5.10.11.27	2+	528-7		<u>4.636</u>	4.376		
5.10.11.28	2-	S28-8		4BZO	4.399		
5.10.11.29	3+	528-9		4.696	4.410		
5.10.11.30	3-	S28-10		4.756	4.333		
5.10.11.31	, 4+	\$28 <b>-</b> 11		4.492	4.475		
5.10.11.32	4-	\$26-4, \$28-12		4.415	4.414		
5.10.11.33	Band 5,7+ TM output	\$26-5, \$28-1		4.762	4.380		



TS 16603 Bay B

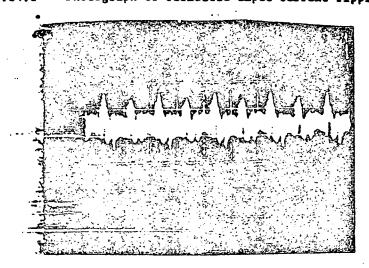
REY PARA	DESCRIPTION	DVM SHITCH	LIEUTS PRIKARY	THE PROPERTY AND A
		•		ERRORIEMA
5.10.11.34	Band 5,7- TM output	<b>826-5, 828-2</b>	4.247	4.3/5
5.10.11.35	6+	S28-3	402	4.273
5.10.11.36	Band 6-	829-4	<u>4.392</u>	4.360
5.10.11.37	SMA Etr +	828-5	CAR	4.562
5.10.11.38	Btr -	S28-6	4.442	4.503
5.10.11.39	+7V	S28-7		
		(528-8 for	6902	一
5.10.11.40	+29V	RD(7)	- 4.258	et 212
3.10.11.40	7290	\$2 <del>8-9</del> (\$28-11 for	- 4.620	4.312
		RDT)		
5.10.11.41	SMA -29V	S26-5, S28-10 (S28-12 for RDT)	3 <u>-922</u>	3.Z2
5.10.11.42	Radiometer	S26-6, S28-2	5.114	5.264
5.10.11.43	CDVU	s28-3	5.343	C287
5.10.11.44	Analog +	S28-4	- 0.67	· 4 733
5.10.11.45	Anelog -	S28-5	-4.456	4210
5.10.11.46	Electromech.	y S28-6	5.926	5 337
5.10.11.47	Outgas - TM output	S26-6, S28-7	5.129	5.041
5.10.12.1	Bus voltage	\$26-1, \$27-1 (\$27-3 for EDT)	35.02	35.03
5.10.12.2	Input bus current	S26-1, S27-2 (S27-4 for RDT)	38. <u>07</u> mv	3.12
5.10.12.3	SMA Etr + output volta	•	- 21.29	2/23
5.10.12.4	Htr + rippl	e Seen on Scope	€30 eV pk-pk £2	80
5.10.12.5	Htr - volta	ge S26-2, S27-6	-22.82	-22-55
5.10.12.6	SMA Htr - rippl	e Seen on Scope	≪30 mV pk-pk <u>~20</u>	20
5.10.12.7	CDVU volta	ge S26-3, S27-3	7.425	7630
5.10.12.8	CDVU rippl	e Sean on Scope	Q40 eV pt-pk 30	<u></u>
5.10.12.9	Outgas - output volts	ge S26-3, S27-7	<b>%</b> .43	87.54
5.10.12.10	Outgas - output rippl	e Seen on Scope 2	2.50V pk-pk 360mm	350a1
5.10.12.11	Parasitic output volta	ge \$26-3. \$27-9 (\$27-10 for RDT)	28.85	D.441
5.10.12.12	Parasitic output rippl	e Seen on Scope	<900 aV pk-pk 1006√	1900



TS 16603 Rev B 18 December 15

10.4 Performance test (continued)

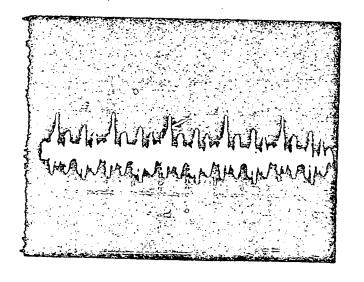
EF PARA	DESCRIPTION	DVM SHITCH	IMITS	MEASU PRIMARY	REMENT REDUND
5.10.13.1	Input current telemetry	\$26-4, \$28-2 (\$28-4 for RDT)		682.5=4	787.
5.10.13.2	SMA Htr + output	\$26 <b>-</b> 5, \$28-5	:	3.888	3.99
5.10.13.3	SMA Htr -	\$26-5, \$28-6		3.992	4.10:
5.10.13.4	CDVU	S26-6, S28-3		4.166	4.27
5.10.13.5	Outgas output talemetry	S26-6, S28-7	•	4,313	439
5.10.14.1	Photograph of reflected	input current ripple i	Patim n	mode - PRTMAR	Y SIDE



(204) CURRENT/DIV: 5 MA.C.

(10ms) SHEEP PATE.

5010.14.1 Thotograph of reflected input current ripple in outgas mode - REDUNDANT SIDE



(2mA) CURRENT/DIV: 5/M N.C.

(10us) SWEEP RATE: 5/L

103



TS 16603 Rev B

18 December 1980

10.4 Performance test (continued)

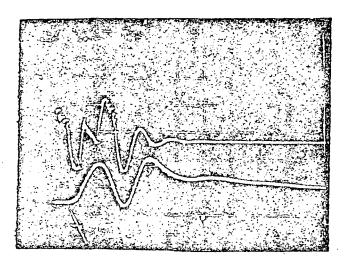
FEE 3 3 188

		DVM SWITCH	DVM SWITCH		MEASUREMENT	
REF. PARA.	DESCRIPTION	POSITIONS	LIMITS	PRIMARY	REDUNDA	
				- 4 23	01/00	

5.10.15.1.1 Input current with CDVU

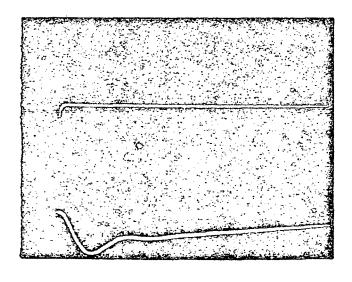
S26-1, S27-2 (S27-4 for RDT) 36.33 34.25

5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is enabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: ZV/DIV
(200mA) CURRENT/DIV: Minimum
(14S) SWEEP RATE: Les Se/D

5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is disabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: 2 V A)V
(200mA) CURRENT/DIV: 000 A)V
(2ms) SWEEP RATE: 4 50 A)V

# TS 16603 Rev B 18 December 1980

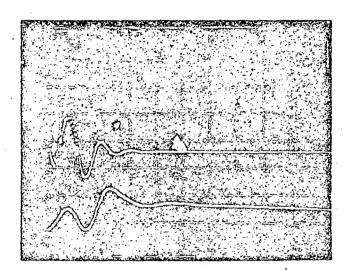
10.4 Performance test (continued)



EF. PARA.

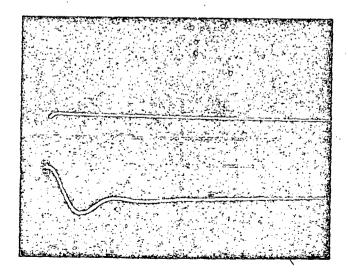
#### DESCRIPTION

5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is enabled - REDUNDANT SIDE



**(2**₹) VOLTAGE/DIV: Z (200mA) CURRENT/DIV: Allers (Ims) SWEEP RATE:

5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is disabled - REDUNDANT SIDE



(2**V**) (200mA) CURRENT/DIV: 100 SHEEP RATE: (2mS)



TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

TE:37

MEASUREMENT PRIMARY REDUNDANT

EF, PARA, DESCRIPTION

POSITIONS

DVM SWITCH

LIMITS

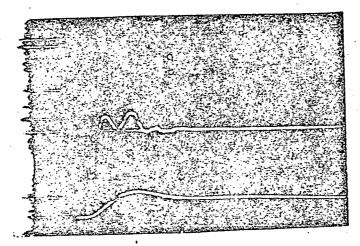
12.919 N 13.407

5.10.15.2.1 Input bus current with outgas disabled

\$26-1, \$27-2 (\$27-4 for RDT)

16:11-FRY (2:)

5.10.15.2.2 Photograph of input bus current and outgas voltage as outgas load is enabled - PRIMARY SIDE

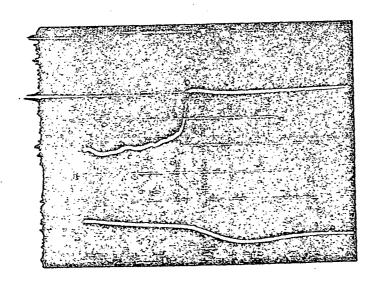


(5V) VOLTAGE/DIV: SYLLIV

(2A) CURRENT/DIV: 2 Ange ON

(lms) SHEEP RATE: SDOJASE

5.10.15.2.2 Photograph of input bus current and outgos voltage as outgas load is disabled - PRIMARY SIDE



(5V) VOLTAGE/DIV: SV/DIV.

(2A) CURRENT/DIV: 2

(2ms) Sweep rate: Supple A



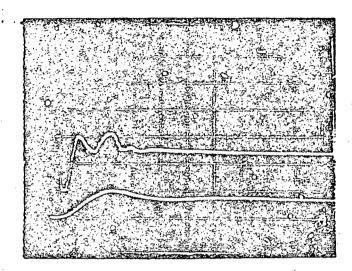
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

FF. PARA.

DESCRIPTION

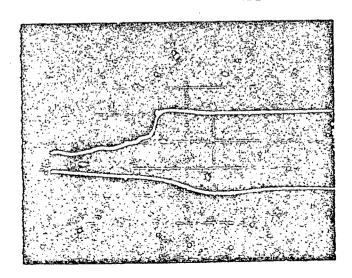
5.10.15.2.2 Photograph of input bus current and outgas voltage as outgas load is enabled - REDUNDANT SIDE



(5V) VOLTAGE/DIV: 5 (2A) CURRENT/DIV: Z

(500us) SWEEP RATE: SOCIASI

5.10.15.2.2 Photograph of input his current and outgus voltage as outgas load is disabled - REDUNDANT SIDE



(5V) VOLTAGE/DIV:

(2A) CURRENT/DIV: Zha

(1ms) SWEEP RATE: 500 1500

TS 16603 Bev 3

# 10.4 Performance (est (continued)

x 1002

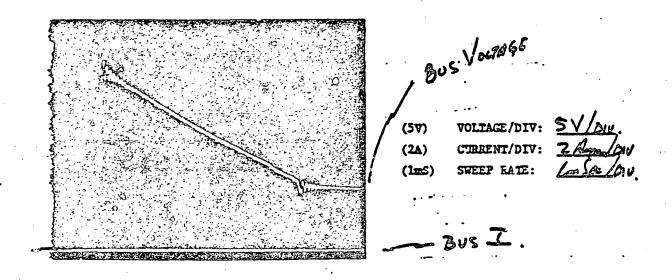
RCF. PARA.	DESCRIPTION	DUM SUITCA POSITION	LPHIS	erasurement Prihary redundat
5.10.16.1	BPS voltage	S26-1, S27-1 (S27-3 for RDT)		35.034., 35.0:
5.10.16.2	BPS current	\$26-1, \$27-2 (\$27-4 for RDT)	•	15:240 V., 15:77
5.10.16.3	SMA Htx +output voltage	S26-2, S27-5		· 21.62 V, 22.04
5.10.16.4	SMA Htr +load current	\$26-8 <b>,</b> \$34-1	•	46.62 V(15) 47.5?
5.10.16.5	SMA Htr -output voltage	526-2, S27 <b>-</b> 6		-22.01 10-224
5.10.16.6	SMA Her -load current	\$2 <del>6-</del> 8, \$34-2		-8.690 m-8869
3.10.16.7	<b>⊅</b> VU output voltage	S26-3, S27-3		7.421 (10) 7628
5.10.16.8	CDVU load current	S26-8, S34 <b>-</b> 10		265.7 102330
5.10.16.9	Parasitic output voltage	S26-3, S27-9 (S27-)	LO)	30.544 (17) 31.191
5.10.16.10	Parasitic load current	S26-8, S34-7		142.34 40,185.36
5.10.16.11	Input power (5.10.16.1 x 5.10.16.2)	:		-53.38L 55.32
5.10.16.12	Output power	(Primary) (Redundani	<u>:</u> )	16.965 17.737
\$	((5.10.16.3 x 5.10.16.4) + (5.10.16.5 x 5.10.16.6) + (5.10.15.7 x 5.10.16.8) + (5.10.16.9 x 5.10.16.10			la la
5.10.16.13	Efficiency ((5.10.14.12) ÷ (5.10.16.11))		٠.	31.8% 32.1%



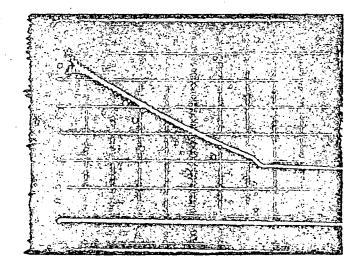
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

5.10.17.1 Photograph of input bus current and input bus voltage as is disable - PRIMARY SIDE



5.10.17.1 Photograph of input bus current and imput bus voltage as is disabled - REDUNDANT SIDE



(5V) VOLTAGE/DIV: 5V
(2A) CURRENT/DIV: ZA

(lms) SWEEP RATE:



TS 16603 Rev B 18 December1980

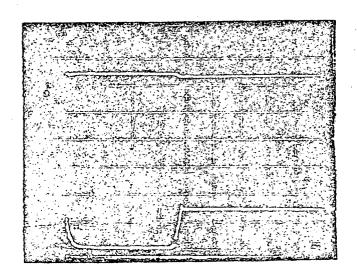
10.4 Performance test (continued)

5.10.17.2 Unit stays off (check)



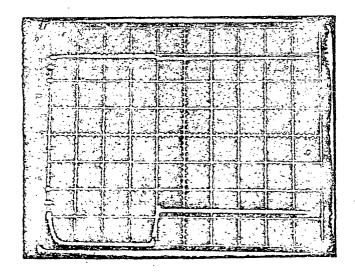


Photograph of input bus current and input bus voltage 5.10.17.3 as is enabled - PRIMARY SIDE



CURRENT/DIV: (100ms) SWEEP RATE:

5.10.17.3 Photograph of input bus current and input bus voltage as as is enabled - REDUNDANT SIDE .



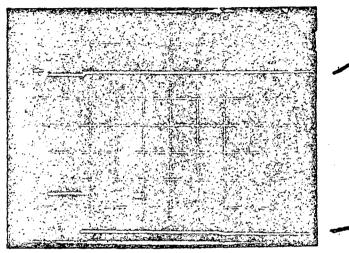
VOLTAGE/DIV: **(2**∇) CURRENT/DIV: (2A) (100ms) SWEEP RATE: Dom



TS 16603 Rday B 18 December 198

#### 10.4 Performance test (continued)

5.10.17.4 Photograph of input bus current and input bus voltage as is disabled - PRIMARY SIDE



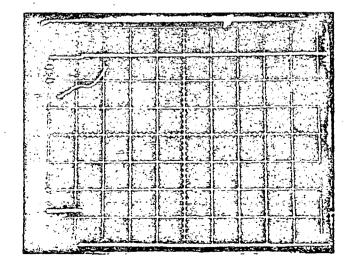
7308V

(2V) VOLTAGE/DIV: 2

(10ms) SWEEP RATE:

~ 303 I.

5.10.17.4 Photograph of input bus current and input bus voltage as is disabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: 5

(2A) CURRENT/DIV:

(10ms) SWEEF RATE:

GE/DIV: SV MI/DIV: ZA

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**POSITIONS** 



TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

F. PARA

DVM SWITCH

LIMITS

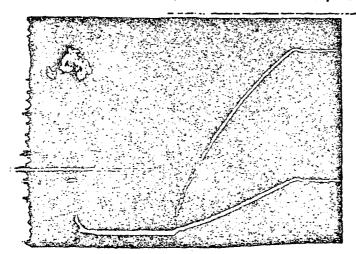
**MEASUREMENT** 

PRIMARY REDUNDANT

5.10.17.5 Record that UUT operates correctly.

(checkmark)

5.10.18.1 Photograph of input bus current and MUX output voltage as MUX enable command is issued (all loads are ON except outgas) - PRIMARY SIDE



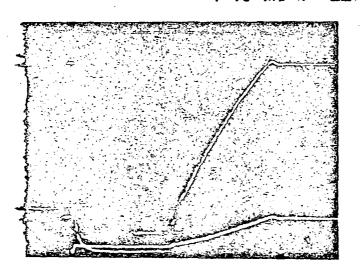
(5V) VOLTAGE/DIV: SV DIV.

(5A) CURRENT/DIV: SAMPLE DIV.

(20ms) SUPER RATE: 10 and 50 / DIV.

(20ms) SWEEP RATE: (OAMSE, DIE

5.10.18.2 Photograph of input bus current and parasitic output voltage as parasitic enable command is issued (all loads are ON except outgas) - PRIMARY SIDE



(5V) VOLTAGE/DIV: SV/DIV (5A) CURRENT/DIV: SAME AV

(20ms) SWEEP RATE: Danse DIE.

112

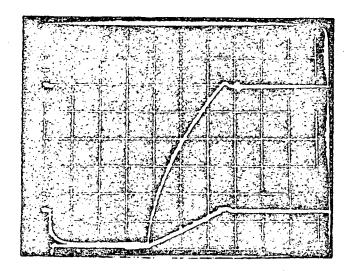


TS 16603 Rev 3 18 December 1980

### 10.4 Performance test (continued)

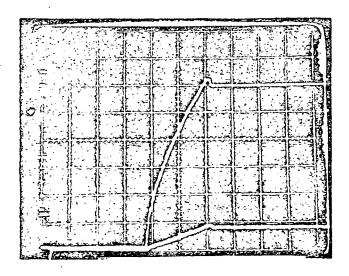
€:

.10.18.1 Photograph of input bus current and MUX output voltage as MUX enable command is issued (all loads are ON except outgas) — REDUNDANT SIDE



(5V) VOLTAGE/DIV: SI (5A) CURRENT/DIV: SA (20ms) SWEEP RATE: 10 ms

3.10.18.2 Photograph of input bus current and MUX output woltage as parasitic enable command is issued (all loads are ON except outgas) - REDUNDANT SIDE



(5v) Volts/Div: 5V (5A) Current/Div: 5A (70mS) Sweep Rate: 10 mm S

HAC TEST \$30 15 16603 Sev 3

## 10.4 Performance test (continued)

REF. PARA.	DESCRIPTION	FOSTITIONS	1.00TTS	TRASULDENT TRANS TROUBLANT
5.10.18.4	Undervoltage Trip Point (ON/OFF)	826-1, 627-1 (\$27-3 for RDT)	18.0 21.507	18.074 V #3024
5.10.18.5	UUT stays OFF			
5.10.18.6	Undervoltage Trip Point (OFF/ON)	\$26-1, \$27-1 (\$27-3 for TDT)	19.0 ±1.50V	18.9111 18.875
5.10.18.7	Overvoltage Trip Point	S26-1, S27-1 (S27-3 for RDT)	38.0 ± 27	3 <u>854</u> V 3700 5:
5.10.18.8	UUT stays OFF	•		
5.10.18.9	UUT turns ON			<b>フ</b> フ

2/3/82 DATE

ELLARS (CHEMAN)

114



TS 16603 Rev B 18 December 1980

-	10.4	Performance test - Lon	r Form			
•	PROTOFLIGHT	NA OR FLIGH	T	s/N 004	TEMPERATURE	:+1310A
	IN-PROCESS_	NA QUAL	MA	OR ACCEPTANCE		
	TESTING PHA	se FINAL HOT -Long	Form I	INE VOLTAGE:	23.0	VOLTS
	·		DVM SWITCH		MEASUT	EMENT
	REF. PARA.	DESCRIPTION	POSITIONS	LIMITS	PRIMARY	REDUNDANT
	5.10.1.1	Calibrate cmd gen		••		
	5.10.2.1	Input bus current	S26-1, S27-2 (S27-4 for redundant)		V 220my	0.217
	5.10.2.2	MUX output voltage	\$26-3, \$27-1	30.0 ±0.90V	30.40V	30.01 V
	5.10.2.3	MUX load current	S26-3, S27-12	3.55 ±0.40A	33.02~V	32,63
	The rest of	Section 5.10.2 require	es only checkin	g voltage = in	dicate by che	ckmarks.
		•				/.
	5.10.2.4.1	B1 + output voltage	S26-1, S27-5			<u>-</u>
	5.10.2.4.2	B1 -	S27-6			· V/
5.3	5.10.2.4.3	31 -	S27-5	٠.		
	5.10.2.4.4	31. +	S27-7		<u>V</u>	
	5.10.2.5.1	E2 ÷	\$27 <b>-7</b>		6	
,	5.10.2.5.2	B2 -	S27-8			
. •	5.10.2.5.3	32 -	S27-8		V	
	5.10.2.5.4	B2 +	S27-7			
	5.10.2.6.1	33 +	\$27 <b>-</b> 9		V	
	5.10.2.6.2	33 -	S27-10	· · · · · · · · · · · · · · · · · · ·	V	<del></del>
	5.10.2.6.3	33 -	\$27-10			<u> </u>
	5.10.2.6.4	33 +	\$27-9		~	<del>/-</del>
	5.10.2.7.1	B4 +	S27-11		V	
	5.10.2.7.2	34 -	S27-12	•	<u> </u>	
	5.10.2.7.3	B4 -	\$27-12		<u> </u>	
	5.10.2.7.4	B4 ÷	S26-1, S27-11	٠.	V	
	5.10.2.3.1	E5,7+	S26-2, S27-1		<u> </u>	
	5.10.2.8.2	35,7-	S27-2	•	V	<del></del>
	5.10.2.8.3	B5,7-	527-2		<u>n</u>	
5.1	5.10.2.8.4	35,7+	S27-1		<u>'/</u>	
	5.10.2.9.1	B6 +	\$27-3	ے بریر ل	D V	
	5.10.2.9.2	B6 - cutput voltage	S26-2, S27-4	1600.60	3	
		•		1.6 197		(115)

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TS 15603 Rev B 19 December 1990 SCN-1 1/21/8,

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<u>}</u>		PET PARA.	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	MEASUREMENT PRIMARY REDUNDA
	.,	5.10.2.9.3	B6 - output voltage	526-2, S27-4		V /,
		5.10.2.9.4	36 + output voltage	S26-2, S27-3		V
		5.10.2,10.1	SMA HIR + output voltage	\$27-5		
		5.10.2.10.2	•	S27-6	•	V
		5.10.2.10.3	•	S27-6	. •	
4		3.10.2.10.4	•	♥ s27-5		V
5		5.10.2.11.1	<b>-</b> 7₹	\$25-2, \$27-7		V
5		5.10.2.11.2	. <del> </del>	(S27-8 for RDT)		
•		5.10.2.12.1	÷29V	S25-2, S27-9		V /
٠.				(\$27-11 for RDT)		
1		5.10.2.12.2	-29♥	\$26-2, \$27-10		V
Lı				(S27-12 for RDT)		
C		5.10.2.12.3	-29♥	S25-2, S17-10		
)		5.10.2.12.4	SMA EIR -29V	\$26-2, \$27-9		<u> </u>
		5.10.2.13.1	Radiometer	\$26-3, \$27-2		V   V   V   V   V   V   V   V   V   V
		5.10.2.13.2	Radiometer	527-2		V V
:		5.10.2.14.1	COVI	S27-3		<u> </u>
3		5.10.2.14.2	COVU	S27-3	,	V
		5.10.2.15.1	Analog +	S27-4		V V
		5.10.2.15.2	Analog -	S27 - 5		<u>v</u> /
3		5.10.2.15.3	Analog -	\$27-5		v V
		5.10.2.15.4	Analog +	S27-4		<u> </u>
<b>?</b> .		5.10.2.16.1	Electromech.	S27-6		
•		5.10.2.16.2	Electromech.	\$27-6		<u>v</u>
:		5.10.2.17.1	Ourges output voltage	S26-3, S27-7		<u> </u>
2		5.10.3.1	Bus voltage	S25-1, S27-1	•	
:.				(\$27-3 for RDT)		23.03 (49) 23.6
		5.10.3.2	MUX load current	\$26-3, \$27-12	4.130 <del>_</del> 0.9	25A 41.30 V 41.
	•	5.10.3.3	Bus current	\$26-1, \$27-2	G. Beren	161.98
			•	(\$27-4 for RDT)	6.80	143 00 (50) 159
	4	5.10.3.3.2	3PS Voltage	\$26-1, \$27-1 \$27-3)		23.04 23.04
		5.10.3.3.3	BPS Current	\$25-1, \$27-2 (\$27-4)		143.05 159.41.
		5.10.3.3.4	MIK Current	\$26-3, \$27-12		41.29 41.31



TS 16603 Rev B 18 December 1980

<b>3</b>			•	,
REF. PARA.	DESCRIPTION	DVH SWITCE POSITIONS	LIMITS	MEASUREMENT PRIMARY REDUNE
5.10.3.4.1	Bl + output voltage	S26-1, S27-5	20.50 <u>+</u> 2.50V	20.97 (1) 20.1
5.10.3.4.2	B1 + output ripple	Look on Scope	≪600 mV pk-pk	117
5.10.3.4.3	31 - output voltage	\$26-1, \$27-6	-20.50 ±2.50V	-20,93 (2) -20,0
5.10.3.4.4	B1 - output ripple	Look on Scope	<500 mV pk-pk	(2)
5.10.3.5.1	B2 + output voltage	S26-1, S27-7	20.50 ±2.50V	20.91 (3) =0.7
5.10.3.5.2	B2 + output ripple	Look on Scope	<500 mV pk-pk	- 12)
5.10.3.5.3	32 - output voltage	S26-1, S27-8	-20.50 <u>+</u> 2.50V	
5.10.3.5.4	BC - output ripple	Seen on Scope	<600 mV pk-pk	(7)
5.10.3.6.1	B3 + cutput voltage	S26-1, S27-9	20.50 ±2.50V	21.02 (5) 20.
5.10.3.6.2	33 + output ripple	Seen on Scope	<600_=V pk-pk	(2)
5.10.3.6.3	B3 - output voltage	S26-1, S27-10	-20.50 ±2.50V	-20.95 (6) -205
5.10.3.6.4	B3 - output ripple	Seen on Scope	<500 =V pk-pk	[0]
5.10.3.7.1	B4 + output voltage	s26-1, s27-11	20.50 ±2.50V	20.91 (7) 20.50
5.10.3.7.2	.84 + output ripple	Seen on Scope	<600 ±V pk-pk	* * *
.10.3.7.3	B4 - output voltage	S26-1, S27-12	-20.50 <u>+</u> 2.50v	-20.94 (8) -20.1
5.10.3.7.4	34 - output ripple	Seen on Scope	<500 ≡V pk-pk	(0)
5.10.3.8.1	B5,7 +   voltage	S26-2, S27-1	20.50 ±2.50V	20.32 (9) 20.14
5.10.3.8.2	35,7 + ripple	Seen on Scope	≪500 ⊐V pk-pk	
5.10.3.8.3	35,7 - voltage	s26-3, s27-2	-20.50 ±2.50V	-20.31 (10) -20.
5.10.3.8.4	B5,7 - ripple	Seen on Scope .	<500 = V pk-pk	*/* ***
5.10.3.9.1	B6 + voltage	s26-2, s27-3	20.50 ±2.50V	20.50 (11) 2050
5.10.3.9.2	36 + ripple	Seen on Scope	<500 ±V pl -pk	
5.10.3.9.3	B5 - voltage	S26-2, S27-4	-20.50 ±2.50V	-20.50 (12) -205
5.10.3.9.4	B6 - ripple	Seen on Scope	<600 =V pk-pk	
5.10.3.10.1	SMA Htr + voltage	s26-2, s27-5	21.20 ±2.12V	2233 (13) 21.4
5.10.3.10.2	SMA Rer + ripple	Seen on Scope	<630 ≡V pk-pk	30 15-1
5.10.3.10.3	SMA Hir - voltage	S26-2, S27-6	-21.20 ±2.12 V	-22.78 (14)-22.5
5.10.3.10.4	SMA Htr - ripple	Seen on Scope	<630 ≡V pk-pk	30 - 15 mi
5.10.3.11.1	SMA +7V voltage	S26-2, S27-7 (S27-8 for RDT)	7.10 ±0.80V	7.688 US) 1.73
5.10.3.11.2	SMA +7V output ripple	Seen on Scope	≪10 ≡V pk-pk	30 25-



Ts 16603 Rev B 18 December 1980

REF. FARA. DESCRIPT	ION	DVM SELECT POSITIONS	LTATE	MPASUREMENT PRIMART REDUNDANT
5.10.3.12.1 1 124 +29V 00	tput voltage	\$26-2, \$27-9 (\$27-11 for HDT)	29.50 ±1.50V	30,54 (16) 30 50V.
5.10.3.12.2 SMA +29V	ripple	Sees on Scope	<870 mV, pk-p	k 45 35 N.
5_40.3.12.3 -684 -29V	voltage	\$25-2, \$27-10 (\$27-12 for RDT)	-29.50 <u>+</u> 1.50⊽	-3053(17) -30.52V
5.10.3.12.4 EB -29V	ripple	Seza oa Scope	<870 nV pk-pk	40 35 N
5.10.3.13.1 MIX	Voltage	S26-3, S27-1	30.00 ±0.90V	30.34 (18) 30.25 V.
5.10.3.13.2 PMX	Tipple	Seen on Scope	≪900 mV, pk-p	
5.10.3.14.1 Radismeter	voltage	S26-3, S27-2	8.50 ±0.857	8743 (A) 1156 V.
5.10.3.14.2 Radiometer	ripple	Seem on Scope		
5.10.3.15.1 CDVU	voltage	S26-3, S27-3	8.00 ±0.807	7.66 (20) 7718 V.
5.10.3.15.2 TOVU	ripple	Seen on Scope	√240 mV pk-pk	30 25 N.
5.10.3.16.1 Amalog +	voltage	.526-3, S27-4	21.20 ±2.12V	22 <u>59</u> (2) 22.51 V
5.10.3.16.2 Analog +	_zipple	Sees on Scope	≪630 mV pk-pk	30 25 mV.
5 10.3.16.3 Analog -	voltage	S26-3, <b>S27-5</b>	-21.20 ±2.12V	-2266 (2) 11.57 V
, 10.3.16.4 Analog -	ripple	Seem on Scope	<530 mV pk-p½	30 25 N
5.10.3.17.1 Electromech	. voltage	526-3, S27 <i>-</i> 6	33.40 ±3.34V	78/8 03 33.17 V
5.10.3.17.2 Electromech	. ripple	Seem on Scope	<b>Q.00</b> pk-pk	30 30 mV
5.10.3.18.1 Outgas	<b>voltage</b>	S26-3, S27-7	100.0 <u>+</u> 12.07	10353 103.01 V
5.10.3.18.2 Outgas ou	tput ripple	Sees on Scope	O.07 pk-pk	9000 10 -V
5.10.4.1 Input curre	nt telemetry	S26-4, S28-2 (S28-4 for EDT)		4.696 4.780 V.
5.10.4.2.1 Sand 1 + vo	lt. telemtry	S26-4, <i>5</i> 28-5		3.765V.
5.10.4.2.2 Rend 1 -		S28-6		7.754 1.150 V.
5.10.4.3.1 Band 2+		S28-7		3725 3.7;0V.
5.10.4.3.2 - Rand 2-		<b>£2</b> 8-8		3715 3.709V.
5.10.4.4.1 Band 3+	1	S28-9		3748 V.
5.10.4.4.2 Sand 3-		S28-10		3 744 3,736 V.
5.10.4.5.1 Bend 4+	1	\$28-11		7 739 3.744V.
5.10.4.5.2 Rend 4-		s26-4, s28-12		3741V.
5.10.4.6.1 Band 5,7+	*	\$26-5, \$28-1		7 732 3.684 V.
5.10.4.6.2 Band 5,7- V	olt. telemetry	S26-5, S28-2		7 <u>717</u> 3.673V.



TS 16603 Rev B 18 December 1980

REF. PARA.	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS		SURPMENT REDUNDA!
5.10.4.7.1	Band 6 + volt. telentry	S26-5, S26-3		7.723	3.715
5.10.4.7.2	Band 6 - 1	S28-4		3 758	3. 747
5.10.4.8.1	SMA Htr +	S28-5		4.098	4.103
5.10.4.8.2	SMA Etr -	S28~6		4.146	4.146
5.10.4.9	SMA +7V	\$26-5, \$27-7	• •	• • •	
		(S27-8 for RDT)	•	4.919	4,965
5.10.4.10.1	SMA +29V	S26-5, S28-9 (S27-11 for RDT)	is the	4.190	4.20
5.10.4.10.2	SMA -29V	\$26-5, \$28-10 (\$27-12 for RDT)	•	3994	3.986
5.10.4.11	MIX	\$26-6, \$28-1		4.316	4.27:
5.10.4.12	Radiometer	S26-6, S28-2	•	4.822	4,75%
5.10.4.13	כסע די ייי	\$26-6, \$28-3	•	4.312-	4.366
5.10.4.14.1	Analog + volt. telentry	S26-6, S28-4		4040	4.023
5.10.4.14.2	Analog -	\$26-6, \$28-5	. •.	3973	3.95€
.10.4.15	Electromech.	S28-6		4.036	4.07.
5.10.4.16	Outgas volt. telemetry	S26-6, S28-7		5.176	5.14.
5.10.5.1.1	Analog + load current	\$26-3, \$27-11 mV : 1	0 ≈ Amps	15.769	24) 15.70
5.10.5.1.2	MIX	\$26-3, \$27-12 ₪V ÷ 1	O = Amps	41.38	(25) 41.33
5.10.5.1.3	Band 1 +	\$26-7, \$34-1 ±V ÷ 0	.5 = mA	91.70	(26) 71.52
5.10.5.1.4	Band 1 -	\$34-2		-9187	(27) -71.74
5.10.5,1.5	2 +	S34-3		90.83	RE, -90.71
5.10.5.1.6	2 -	S34-4		-91.70	(29) -91, 55.
5.10.5.1.7	3 +	S34-5		91.39	(10) 40.13
5.10.5.1.8	3 -	s34-6		-91.54 P	(21) -91.35
5.10.5.1.9	4 +	S34-7		91.55	(32) -11.55
5.10.5.1.10	4	S34-8		-91.27	(33) -11.17
5.10.5.1.11	5,7 +	s34 <b>-</b> 9		91.83	(14) 10 58
5.10.5.1.12	5,7 -	s34-10		-90.28	(15) -89.90
5.10.5.1.13	6 +	S34-11		47.84	126) 47.65
5.10.5.1.14	Band 6 -	526-7, S34-12		-47.6B	67) =+7.54
1.10.5.1.15	SMA Htt +	\$26-8, \$34-1 mV ÷ 0.		48.36	(19) 48,34
5.10.5.1.16	SMA Her - load current	\$26-8, \$34-2 mV = mA	4	-9.022	09) - 9.04



12 16603

SCN-2 7-6-81 SCN-3 11/3/8/

	*		FE : 4782	70/8/
REF. PARA.	DESCRIPTION	DVM SWITCE POSITIONS	LIMITS	HEASUREMENT PRIMARY REDUND
5.10.5.1.17	SMA +29V load current	\$26-8, \$34-3 mV		92.97 (6) 50.1
5.10.5.1.18	SMA -29V	S34~4 ⊞V	÷ 0.402 = mA	- 90.70 (H) TULI
5.10.5.1.19	SHA +7V	S34-5 V	÷ 0.1 = Amps	2724 (42) 0.17
5.10.5.1.20	Analog -	534-6 mV	÷ 0.402 = mA	-271.8 (43) 7.17
5.10.5.1.21	Radiometer	S34-9 mV	÷ 0.5 = mA	156.44 (4) 154
5.10.5.1.22	כסייט	\$34-10 mV	+ 0.5 = 12A	273.5 (5)0.271.
5.10.5.1.23	Electromech, load current	\$26-8, \$34-11 mV	÷ 0.402 = mA	211.1 (46):211
5.10.5.2.1	Bus power supply voltage	S26-1, S27-1 (S27-3 for RDT)		22.95 M 23.0
5.10.5.2.2	Bus input current	S26-1, S27-2 mV (S27-4 for RDT)	÷ 10 = Amps	1624 (48) 160
5.10.5.2.3	Ppy (Section 5.10.5)			372.73 369.
5.10.5.2.4	PIN (Section 5.10.3)			373,039 368.4
5.10.5.2.5	P <sub>IN</sub> (avg)			372855 368.7
5.10.5.2.9	Input current at current	limit	26-1, 27-2 (26-1 27-4 Rds	:) / 8763 2 <u>09.0</u>
	Input voltage at current	limit	27-1 (27-3 Rd)	22.30 22.5
	MUX voltage at current li	mit	26-3, 27-1	28.71 26,
	MUX current at current li	mit	27-12	38.81 520
5.10.5.3.1	Pour			274,287 272.4
5.10.5.3.2	Efficiency		> 70%	74.05 74.3

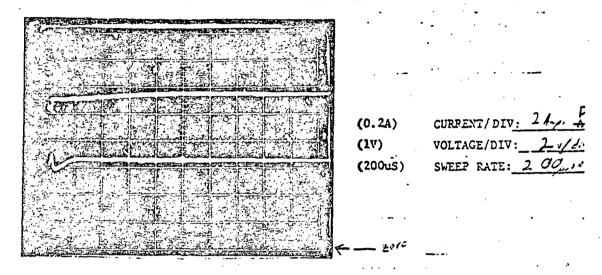


TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

KEF, PARA,	DESCRIPTION	. DVM SWITCH POSITIONS	LIMITS	MEAS PRIMARY	UREIENT REDUNDI
5.10.6.1	+7V output pulsed	\$26-2, \$27-7 (\$27-8 for RDT)	7.10 <u>+</u> 0.80v	6.970	7.051

5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V output is being pulse-loaded-PRIMARY SIDE



5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as pulse-load on SMA +7V outputs is being removed - PRIMARY SIDE

THE BEST OF		•
		<b>a</b>
	<b>40</b> 0	(2-1)
	(0.2A)	CURRENT/DIV: 2ps
	<b>(</b> IV)	VOLTAGE/DIV: 25/
	_	
Silver Brown Silver	(200us)	SWEEP RATE: 50
و المعالم المع		
· 一个一个一个		
"是是我们的",他们把		
THE AND THE STATE OF THE STATE	- Zeroi	/ 4 .



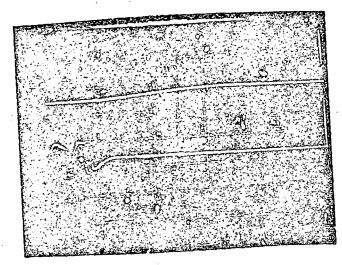
TS 16603 Rev B 18 December 1980

10.4 Performance test (centinued)

DESCRIPTION

REF. PARA.

5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V output is being pulse-loaded-REDUNDANT SIDE

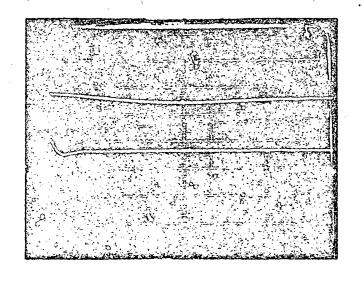


(0.2A) CURRENT/DIV: 24, A.C.

(1V) VOLTAGE/DIV: 2 V.

(200us) SWEEP RATE: 2 30 500.

5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as pulse-load is being removed-REDUNDANT SIDE



(0.2A) CURRENT/DIV: 2 A, A.C.

(1V) VOLTAGE/DIV: 2 V.

(200uS) SWEEP RATE: 100 A (V)

122

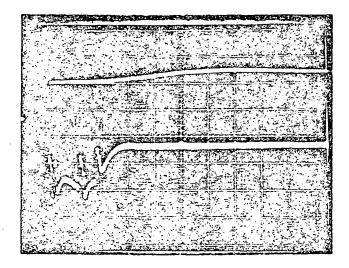


TS 16603
Rev B
10 December 1880
Scal 2 9-6-91

#### 10.4 Performance test (continued)

REF. PARA	DESCRIPTION	DVM SWITCE POSITIONS	LIMITS	MFASURIMENT PRIMARY REDUNDANT
5.10.6.3	Input bus current	S26-1, S27-2 (S27-4 for RDT)		168.45.4 167.47
5.10.6.4	SMA +7V Th- pulsed	S26-5, S28-7 (S28-8 for RDT)		4.552V 4.642V
5.10.6.5	SMA +7V load current- pulsed	(\$26-8, \$34-5	•	453,1 V 455,5 V
			_	

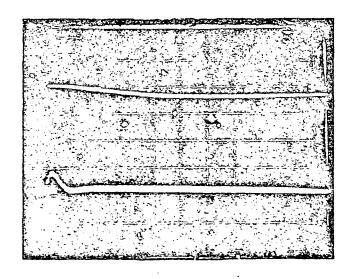
5.10.6.6 Photograph of transients induced on input hus current and SMA +7V load current as SMA +7V output is being pulse-loaded-PRIMARY SIDE



(LA) \* SMA CURRENT/DIV: 100 V (NA) BUS CURRENT/DIV: 1... A.C. (200us) SWEEP RATE: 200

\* Using 0.1 \_\_shunt and 100 mV/Div on scope

5..... unit as pulse-load is being removed-PRIMARY SIDE



(1A) SHA CURRENT/DIV: 130 V

(NA) BUS CURRENT/DIV: 1 A-p. A.C.

(200us) SWEEP RATE: 2000 per

\*Using 0.1 \_\_shunt and 100mV/Div on Scope \_

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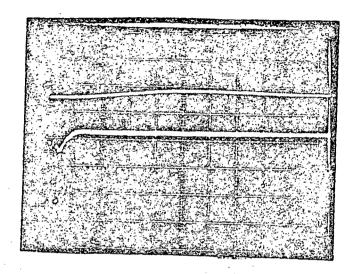
TS 16603 Rev B <del>18 December 1980</del> *ECS*-2 *P-6-81* 

10.4 Performance test (continued)

REF, PARA

DESCRIPTION

5.10.6.6 Photograph of transients induced on input bus current and SMA + 7V load current as SMA + 7V output is being pulse loaded - REDUNDANT SIDE



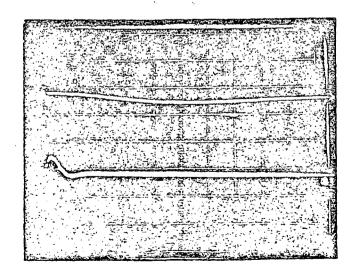
(1A)\* SMA CURRENT/DIV: 100, V.

(2A) BUS CURRENT/DIV: 2A

(200us) SWEEP RATE: 200, scc.

\*Using 0.1 sehunt and 100 mV/Div on acope.

5.10.6.6 Photograph of transients induced on input bus current and SMA + 7V load current as pulse-load is removed - REDUNDANT SIDE



(1A)\* SMA CURRENT/DIV: 100.

(2A) BUS CURRENT/DIV: 1A.

(200us) SWEEP RATE: 200us

\*Using 0.1 \_\_\_\_shunt end 100mV/Div on scope.

(124)



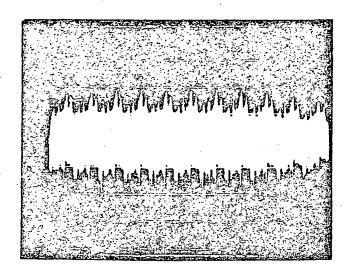
TS 16603 Rev B 18 December 1980

#### 10.4 Performance test (continued)

/ DF. PARA.

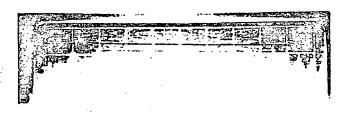
DESCRIPTION

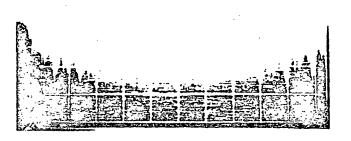
J.10.7.1 Photograph of reflected input current ripple - PRIMARY SIDE



(1ma) CURRENT/DIV: 2-A-ps. A.
(10us) SWEEP RATE: 10m.ec.

5.10.7.1 Photograph of reflected input current ripple - REDUNDANT SIDE





(1ma) CURRENT/DIV: 2 A A.
(10us) SWEEP RATE: 10 4 504



Input current - full load \$26-1, \$27-2 (S27-4 for RDT)

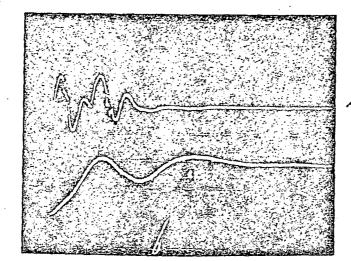


162.32 V 160.05

.8.1.2 Input current w/o analog Same load



,.10.8.1.3 Photograph of transients induced on input bus current and analog + voltage as analog output is enabled - PRIMARY SIDE



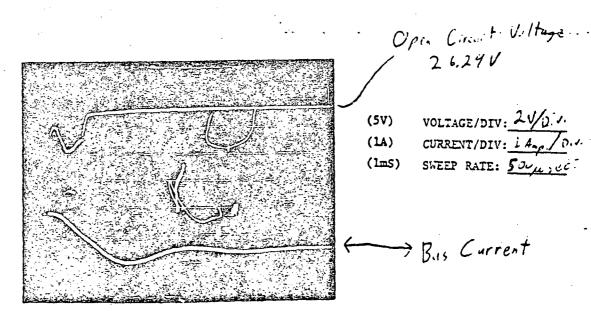
Ost pot Vitore Links 22.59 V

VOLTAGE/DIV: 2 volt/20 (2V)

CURRENT/DIV: idap /Dv. (1A)

(500us) SWEEP RATE: 50 picc.

5.10.8.1.3 Photograph of transferts Induced on input bus current and analog + voltage as analog output is disabled - PRIMARY SIDE



-77-

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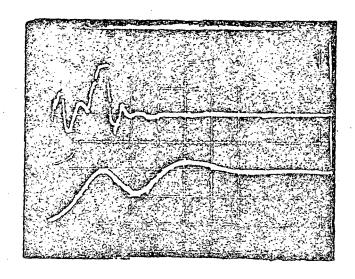
TS 16603 Rev 3 18 December 1980

10.4 Performance test (continued)

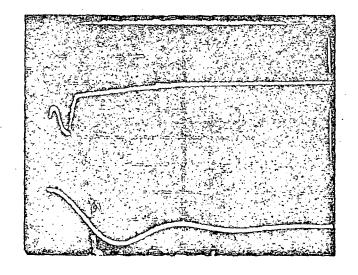
REF. PARA

DESCRIPTION

5.10.5.1.3 Photograph of transients induced on input bus current and analog + output voltage as analog output is enabled - REDUNDANT SIDE.



5.10.8.1.3 Photograph of transients induced on imput bus current and analog + output voltage as analog output is disabled - REDUNDANT SIDE.



(SV) VOLIAGE/DIV: 2V.

(1A) CURRENT/DIV: 1A.

(1ms) Sweet Rate: 500 sec.

127



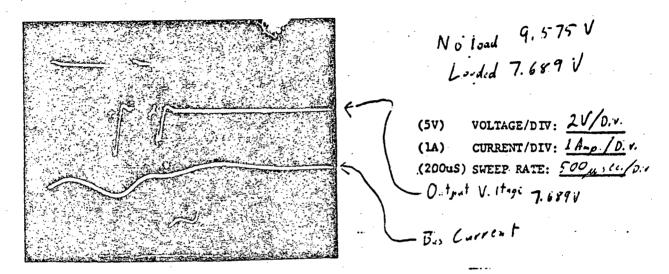
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

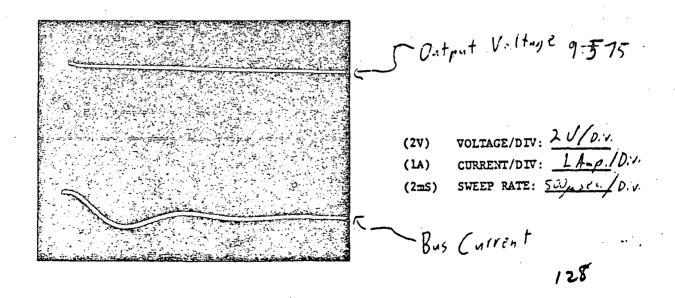
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•			DVM SWITCH		MEASUREMENT		
IF. PARA.	DESCRIPTION	<u> </u>	POSITIONS	LIMITS	PRIMARY	REDUNDANT	
5.10.8.2.1	Input bus current w/		S26-1, S27-2 (S27-4 for RDT)		147.62 V	147.50_V	

5.10.8.2.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V is enabled - PRIMARY SIDE.



5.10.8.2.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V is disabled - PRIMARY SIDE.





TS 16603 Rev B 18 December 1980

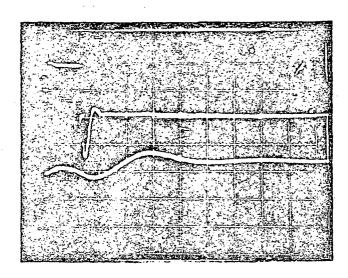
10.4 Performance test (continued)

WB: TES

EF. PARA.

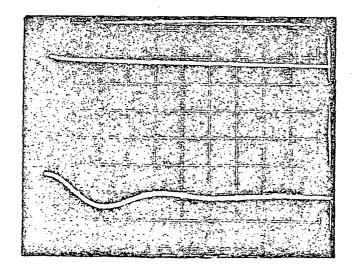
5.10.8.2.2 Photograph of transients induced on input bus current and SMA +7 output voltage as SMA +7V is enabled - REDUNDANT SIDE

DESCRIPTION



(5V) VOLTAGE/DIV: 2V
(1A) CURRENT/DIV: 1A
(200us) SWEEP RATE: 500 g 50.

5.10.8.2.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V is disabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: 2 V

(1A) CURRENT/DIV: 1A

(2ms) SWEEP RATE: 500, je;

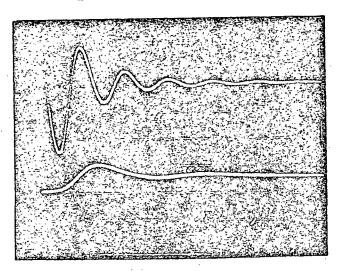


TS 16603 Rev B 18 December 1980

## 10.4 Performance test (continued)

	•	DVM SWITCH	·	MEASUREMENT	
F. PARA.	DESCRIPTION	POSITIONS	LIMITS	PRIMARY	REDUNDAL
5.10.8.2.3	Input bus current w/o SMA +29V load	S26-1, S27-2 (S27-4 for RDT)		157.37 N	155.6

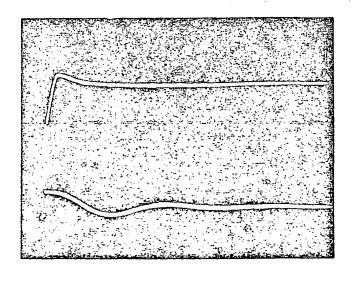
5.10.8.2.4 Photograph of transients induced on input bus current and SMA +29V output voltage as SMA +29V is enabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: 1.0 V/D. (0.5V) CURRENT/DIV: 0.5 And 10.V

(1ms) SWEEP RATE: 500/4 Sec.

5.10.8.2.4 Photograph of transients induced on input bus current and SMA +29V output voltage as SMA +29V is disabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: 1.0 V/D.

(0.5A) CURRENT/DIV: U.5 4-p./0.7.

(1mS) SWEEP RATE: 500msec. Jo.



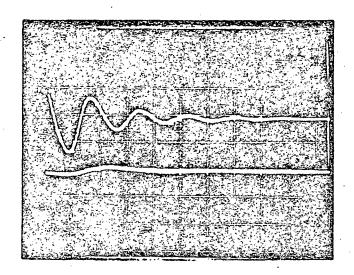
TS 16603 Rev B 18 December 1980

## 10.4 Performance test (continued)

EF. PARA

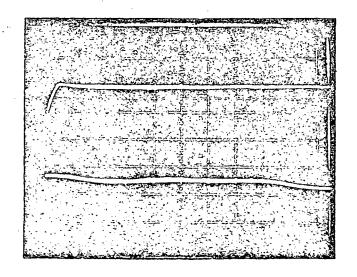
DESCRIPTION

5.10.8.2.4 Photograph of transients induced on input bus current and SMA +29V output voltage as SMA +29V is enabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: 1 V
(0.5A) CURRENT/DIV: 25A
(1ms) SWEEP RATE: 5W, ...

5.10.8.2.4 Photograph of transients induced on input bus current and SMA +29V output voltage as +29V is disabled - REDUNDANT SIDE



(2V) VOLIAGE/DIV: 1V.
(0.5) CURRENT/DIV: 5A

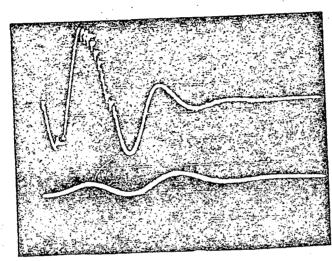
(1ms) SWEEP RATE: 500 cm.



TS 16603 Rev B 18 December 1980

## 10.4 Performance test (continued)

		DVM SWITCH		MEASUREMENT	
EF. PARA.	DESCRIPTION .	POSITIONS	LIMITS	PRIMARY	REDUNDANI
5.10.8.3.1	Input bus current w/o CDVU load	S26-1, S27-2 (S27-4 for RDT)	•	159.03.1	156.61
5.10.8.3.2	Photograph of transient	s induced on input	bus current a	ind CDVU outpi	it

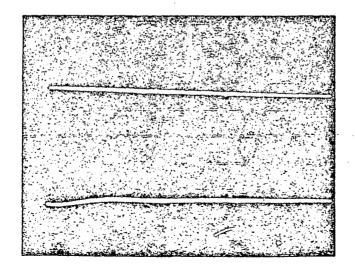


voltage as CDVU is enabled - PRIMARY SIDE

Louded 7.649 V Unloaded 4.541 V

(2V) VOLTAGE/DIV: 1.0V /DV
(0.5A) CURRENT/DIV: 0.5 A-, /D.V.
(1ms) SWEEP RATE: 500, ec. /D.V.

2.10.8.3.2 Photograph of transients induced on input bus current and CDVU output voltage as CDVU is disabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: 1.0 V/D.V. (0.5V) CURRENT/DIV: 05 A-ps /DV

(1ms) SWEEP RATE: 500 user for



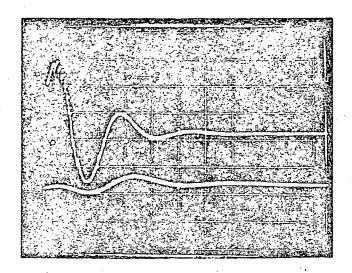
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

EF. PARA

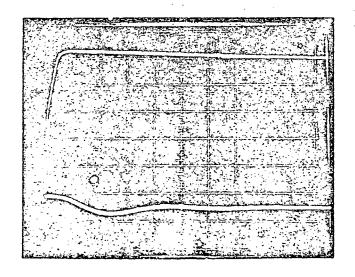
DESCRIPTION

5.10.8.3.2 Photograph of transients induced on input bus current and CDVU output voltage as CDVU is enabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: 1 V
(0.5A) CURRENT/DIV: 0.5A
(1ms) SWEEP RATE: 500 usec.

5.10.8.3.2 Photograph as transients induced on input bus current and CDVU output voltage as CDVU is disabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: 10 (0.5A) CURRENT/DIV: 0.5A (1ms) SWEEP RATE: 500usec.



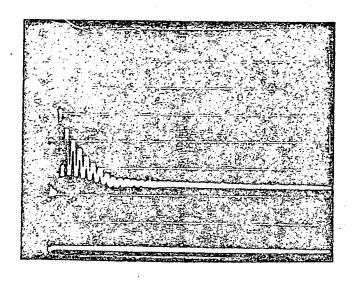
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

/ EF. PARA

DESCRIPTION

5.10.9.1 Photograph of turn-off transient of input bus voltage and input bus current as bus voltage is removed - PRIMARY SIDE

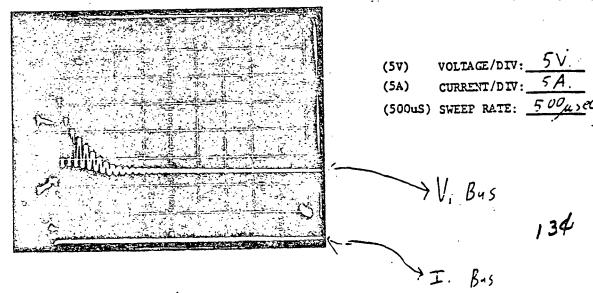


(5V) VOLTAGE/DIV: 5 / D.V.

(5A) CURRENT/DIV: 5 A-p. / D.V.

(500uS) SWEEP RATE: 1 4500

Photograph of turn-off transient of input bus voltage and input bus current as bus voltage is removed - REDUNDANT SIDE





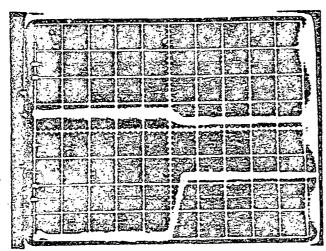
TS 16603 Rev 3 18 December 1980

MB : 4.86

#### 10.4 Performance test (continued)

/		DVM SWITCH		MEA SUREMENT	
REF. PARA.	DESCRIPTION	POSITIONS	LIMITS	PRIMARY	REDUNDA
5.10.9.2	UUT stays off when bus is reapplied.	S1-ON (S2-ON for RDT)	••		
	71				فتمت

5.10.9.3 Photograph of turn-on transient of bus voltage and current as ON command is issued - PRIMARY SIDE

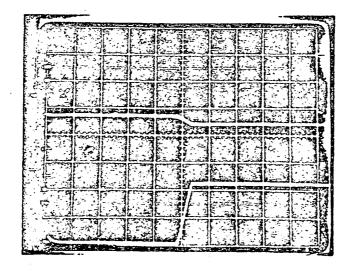


(5V) VOLTAGE/DIV: 5 / Div.

(5A) CUPRENT/DIV: 5 kmps./D

(100mE) SWEEP RATE: 100m sec./

5.10.9.3 Photograph of turn-on transient of bus voltage and current as ON command is issued - REDUNDANT SIDE



(5V) VOLTAGE/DIV: 50 (5A) CURRENT/DIV: 54 (100ms) SWEER RATE: 100 - 50



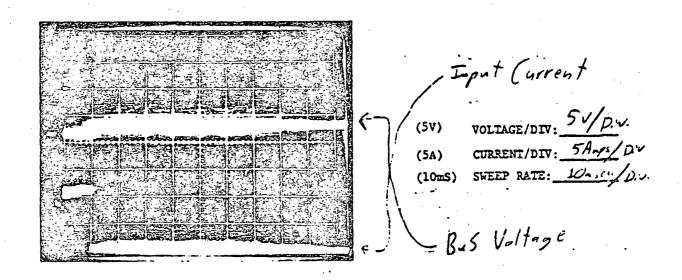
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

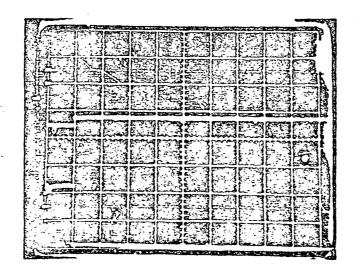
45 - 14

F. PARA. DESCRIPTION

5.10.9.4 Photograph of turn-off transient of input bus voltage and current as OFF command is issued - PRIMARY SIDE



5.10.9.4 Photograph of turn-off transient of input bus voltage and current as OFF command is issued - REDUTANT SIDE



(5V) VOLTAGE/DIV: 5V
(5A) CURRENT/DIV: 5A
(10ms) SWEEP RATE: 10msec.



TS 16603 Rev B 18 December 1980

## 10.4 Performance test (continued)

C

REF. PARA,	DESCRIPTION	DVM SWITCH POSITIONS	LEMITS	PRIMARY REDUNDANT
5.10.9.5	Record	\$27-2 (\$27-4)		156.84 N. 159.67.1
5.10.9.6	Record	(\$27-4 (\$27-2)		2.762-1. 20.420
	Record	s27-2 (s27-4)		
			٠.	155.36_V 151.40-1
5.10.9.7	Record that UUI turns on.	(Checkmark)	•	
5.10.10.1	Input bus current AFTER it reads ~ 17A AND input bus voltage reads ~ 21V.	S26-1, S27-2 (S27-4 for RDT)		1 50 12-4 150, 07-6
5.10.10.2	Input bus voltage with 17.0A load	\$26-1, \$27-1 (\$27-3 for RDT)		23.00 V. 23.02 V.
5.10.10.3	Input current telemetry	\$26-4, \$28-2 (\$28-4 for RDT)		4.570 V. 4.471 V.
5.10.10.4	Input current telemetry output	\$26-4, \$28-2 (\$28-4 for RDT)	. •	3.505V 3.506 V.
. •	Imput bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)	<u>-</u> -	23.07V 13.01V
	Input hus current	\$26-1, \$27-2 (\$27-4 for RDT)		118.14 121 14 .V
5.10.10.5	Input current telemetry output	\$26-4, \$28-2 (\$28-4 for RDT)	·	3. <u>023 V. 3.004</u> V.
	Input bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)		23.00V 23.01 V
	Input bus current	\$26-1, \$27-2 (\$27-4 for RDT)		1/2/4/2/ 2/24-1/24
5.10.10.6	Input current telemetry output	\$26-4, \$28-2 (\$28-4 for RDT)		2.5 oly, 2.50.
· .	Input bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)	:	23.02 V 23.00
	Input bus current	\$26-1, \$27-2 (\$27-4 for RDT)		87.72 V. 18.89.
5.10.10.7	Input current telemetry output	S26-4, S28-2 (S28-4 for RDI)		2.022V. 2.004
• .	Input bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)		23.00V. 21.22
	Input bus current	\$26-1, \$27-2 (\$27-4 for RDT)		73.66-N 7637 4
				137



TS 16603 Rev B 18 December 1980

### 10.4 Performance test (continued)

5,

10.4	et lot mance cest (continue	<u>u</u>		
RET PARA	DESCRIPTION	DVM SWITCE POSITIONS	LEMIS	HEASURFURT PRIMARY REMUNDANT
5.10.10.8	Imput current relementry output	526-4, S28-2 (S28-4 for RDT)		1.50411. 1.5190-1
	Imput bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)		23.00 V 23.02 V.
	Imput bus current	\$26-1, \$27-2 (\$27-4 for RDT)		57.62 N. 59 82-1
5.10.10.9	Laput current telemetry output	\$26-4, \$28-2 (\$28-4 for RDT)		,4497V. 1.0539V
	Imput bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)		23.05V 23.0V
	Imput bus current	\$25-1, \$27-2 (\$27-4 for RDT)		42.48.V -2.72 ml
5.10.10.10	laput current telementy output	\$26-4, \$28-2 (\$28-4 for RDT)		25274V. 05153 V.
	Impur bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)		23.02 1 23.021
	Topus bus current	\$26-1, \$27-2 (\$27-4 for RDT)		30.15 V 2 738 V
5.10.10.11	Intui current telemetry output:	\$26-4, \$28-2 (\$25-4 for RDI)		.21 <u>19</u>
	laput bus roltage	\$26-1, \$27-1 (\$27-3 for RDT)		23.03V. 23.07V
	Imput bus currest	\$26-1, \$27-2 (\$27-4 for RDT)		21.01.4 20.15.4
5.10.10.12	Imput current telemetry output	\$26-4, \$28-2 (\$28-4 for RDT)		61.80 J
	Imput bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)		23.050 -1
·	Imput bus current	\$26-1, \$27-2 (\$27-4 for RDT)		13.171 -1
5.10.11.1	Band 1+ output voltage	s25-1, s27-5		22.49 V 23.
5.10.11.2	Band 1- output voltage	s27-6		-23.08 V22.55
5.10.11.3	1 2+ 1	527-7		23.2/1. 22.746
5.10.11.4	2-	S27-8		-23.22V2
5.10.11.5	3+	S27-9		23.14V. 2,
5.10.11.6	<b>Y</b> 3- <b>Y</b>	₹ S27-10		-22.71 V12.8-
5.10.11.7	Sand 4+ output voltage	526-1, 527-11		23.24V. 210-



#### TS 16603 Rev B 10 December 1980 ECA-2 F.6-8/

			. FEF ⊃ 4182		
REF. PARA.	DESCRIPTION	DVM SWITCE	1 TMTMC		PEMENT
ALT TAU	DESCRIPTION .	POSITIONS	LIMITS	PRIMARY	REDUNDAN
5.10.11.8	Band 4- output voltage	S26-1, S27-12		-23.06V.	-22.741
5.10.11.9	5,7+	S26-2, S27-1		22.68V.	22.72
5.10.11.10	5,7-	S27-2		-2 2,62 V	-22.046
5.10.11.11	<b>₹</b> 6+	S27 <b>-</b> 3	٠.	22.51V.	22.561
5.10.11.12	Bend 6-	S27-4	•	-22.78 V	-22,72
5.10.11.13	SMA Htr +	\$27 <b>-</b> 5	•	24.270	24.57
5.10.11.14	Etr -	-S27-6		-24.77 V.	-24.671
5.10.11.15	+7v	\$27-7		9:106 V	N/A
5.10.11	+7V	(\$27-8		N/A	9. 187 V.
		For RDT)		2/1/	
5.10.11	+29V	\$27 <b>-</b> 9	÷	32.36V.	n7a
5.10.11	+29V	(\$27-11		27/4	32.74V
• • • • •		For RDT)		n/a -32 .86V,	
5.10.11	₩ -29V	\$27-10			N/A
	SMA -29V	S26-2, (S27-12 for RDT)		n/a	-32.481
5.10.11.18	Radiometer	526-3, 527-2		1.712 V.	7.8130
5.10.11.19	כסיט	\$27-3		1.381 V.	4 4466
5.10.11.20	Analog +	\$27-4		26.51V	27.010.
5.10.11.21	Analog -	s27-5		- 23.94 V	- 23.77
5.10.11.22	Electromech.	s27-6	•	38.34V	32.03 0
5.10.11.23	Outgas	s27-7		101.81V	121.76 V
5.10.11.24	Parasitic y	S27-9		31.02 V	N/A
	Parasitic output voltage	e S26-3, (S27-10 for RDT)		N/A	31. J. V.
5.10.11.25	Band 1+ TM output	S26-4, S28-5		+. 192V	4.217
5.10.11.26	1 1- 1	\$28-6		4.110 V	<u> </u>
5.10.11.27	2+	S28-7		4.2201	<u>ئار 1 ب</u>
5.10.11.28	2-	S28-8		4.197 V	44, 351
5.10.11.29	3+	S28-9		4. 330 V	4.184
5.10.11.30	3-	S28-10		4.1 +8 V	4:552
5.10.11.31	4+	S28-11		4.214 V	-1574
5.10.11.32		\$26-4, \$28-12		4.183V	4 1621
5.10.11.33	Band 5,7+ TM output	526-5. S28-1		4.136V	4.154 4.184 4.252 4.1624 4.143
		<u> </u>			



T5 16603 Rev B

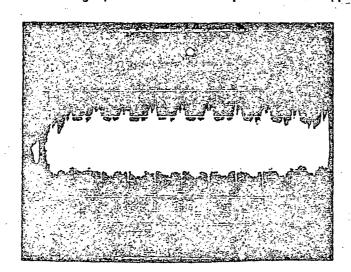
## 10.4 Performance test (continued)

RET PARA	DESCRIPTION	DVM SWITCE POSITIONS LIMIT	MEASUREMENT PRIMARY REDUNDAN
5.10.11.34	Band 5,7- TM output	\$26-5, \$28-2	4.108 V. 4.113
5.10.11.35	6+	s28-3	4.067 V. 4.080
5.10.11.36	Band 6-	S28-4	+.150V. 4.138
5.10.11.37	SMA Htr +	S28-5	4.4298 4.484
5.10.11.38	Ber -	S28-6	4.4831 4.415
5.10.11.39	+70	S28-7 (S28-8 for RDT)	5.613V. 5.656
5.10.11.40	+29V	\$28-9 (\$28-11 for RDT)	4.414V. 4.490
5.10.11.41	SMA -29V	\$26-5, \$28-10 (\$28-12 for RDT)	4.192 V. 4.161
5.10.11.42	Radiometer	\$26 <b>-</b> 6, \$28-2	5.264V. 5.3.19
5.10.11.43	CDAA	\$28-3	5.146V. 5254
5.10.11.44	Analog +	S28-4	4. 708 U. 4 1 99
5.10.11.45	Analog -	S28-5	3.4646. 3.970
5.10.11.46	Electromech.	\$ \$28-6	4.677 V. 4.640
5.10.11.47	Outgas - If output	526-6, S28-7	\$.119 S.USE
5.10.12.1	Bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)	23 <u>.64 V. 23.00</u>
5.10.12.2	Input bus current	\$26-1, \$27-2 (\$27-4 for RDT)	50.43 N. 50.78 N.
5.10.12.3	SMA Htr + output voltage	e \$26-2, \$27-5	21.69V. 21.86V
5.10.12.4	Etr + ripple	Seen on Scope <30 m	V pk-pk 20_V 30_V
5.10.12.5	Htr - voltage	s 526-2, S27-6	-22.18V -21.31 V
5.10.12.6	SMA Etr - ripple	Seen on Scope 430 m	V pk-pk TONV.
5.10.12.7	CDVU voltage	s 526-3, S27-3	7. 6 32 V. 7.752 V.
5.10.12.8	CDVU ripple	Seen on Scope 40 m	V pk-pk <u>+0-V</u> . <u>30</u> -V
5.10.12.9	Ontess - enthut softes	s26-3, S27-7	86.57V. 85.76 V.
5.10.12.10	Outges - output ripple	Seen on Scope 2.50V	
.,5.10.12.11	Parasitic output voltage	\$26-3, \$27-9 (\$27-10 for RDT)	70.45V, 30.37 V 12 V pk-pk
5.10.12.12	Parasitic output ripple	Seen on Scope <900 m	V pk-pk

FST S30 TS 16603 Rev B 18 December 1980

#### 10.4 Performance test (continued)

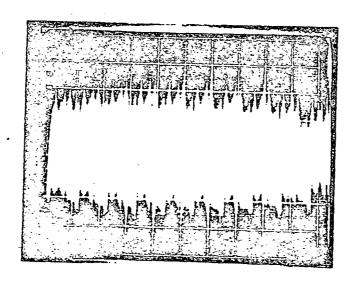
	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	MPASU PRIMARY	REMENT REDUNDANT
EF. PARA.	DESCRIPTION	FUSTITUMS	ETITIO	PALIMAI.	
5.10.13.1	Input current telemetry	S26-4, S28-2 (S28-4 for RDT)		1.2 <u>953</u> V.	1,3 421 1.
5.10.13.2	SMA Her + output	\$26-5, \$28-5		3.462 V.	3.9 MD V.
5.10.13.3	SMA Htr -	S26-5, S28-6		4.014 8.	4:0+3 J.
5.10.13.4	CDVU	<b>S26-6, S28-3</b>		4.2 <u>92V.</u>	4.156 V.
5.10.13.5	Outgas output telemetry	\$26-6, \$28 <b>-7</b>	•	4.32 1 V.	4.508 V.
5.10.14.1	Photograph of reflected :	input current ripple	e in outgas	mode - PRIMAR	Y SIDE



(2ma) current/div: 2.4. A.C.

(10ms) SWEEP RATE: 10 usec.

5.10.14.1 Photograph of reflected input current ripple in outgas mode - REDUNDANT SIDE



(2mA)) CURRENT/DIV: 2-A. A.C.

(10us) SWEEP RATE: 10m sec.



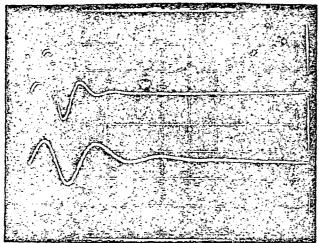
TS 16603 Rev D 18 December 1980

10.4 Performance test (continued)

FTP : 4'82

		DVM SWITCH		MEASI	REMENT
KEF, PARA	DESCRIPTION	POSITIONS	LIMITS	PRIMARY	REDUNDANT
5.10.15.1.1	Input current with CDVU off.	S26-1, S27-2 (S27-4 for RDT)		48.03_4	47.73.1

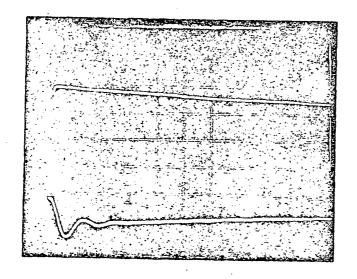
5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is enabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: 2 V.
(200mA) CURRENT/DIV: 200\_A.

(1ms) SWEEP RATE: 1.0 - sec.

5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is disabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: 2 V.
(200mA) CURRENT/DIV: 200 - A.
(2ms) SWEEP RATE: 2-, cc.



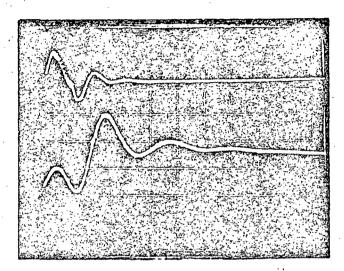
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

7..

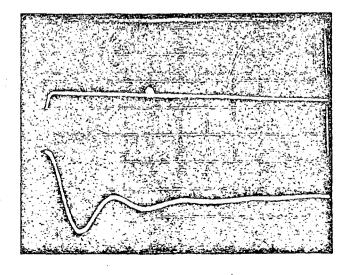
£F. PARA. DESCRIPTION

5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is enabled — REDUL'DANT SIDE



(2V) VOLTAGE/DIV: 2 V
(200mA) CURRENT/DIV: 200mA
(1mS) SWEEP RATE: 1-16...

5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is disabled — REDUNDANT SIDE



(2V) VOLTAGE/DIV: 1V
(200mA) CURRENT/DIV: 200mA
(2mS) SWEEP RATE:

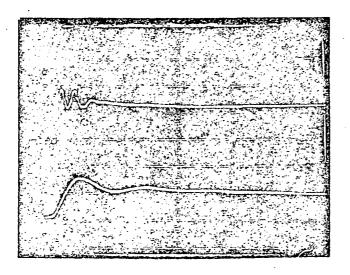


TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

		DVM SWITCH		MEASUREMENT	
REF. PARA.	DESCRIPTION	POSITIONS	LIMITS	PRIMARY	REDUNDANT
5.10.15.2.1	Input bus current with outgas disabled	S26-1, S27-2 (S27-4 for RDT)		16.938mV	1730.

5.10.15.2.2 Photograph of input bus current and outgas voltage is outgas load is enabled - PRIMARY SIDE

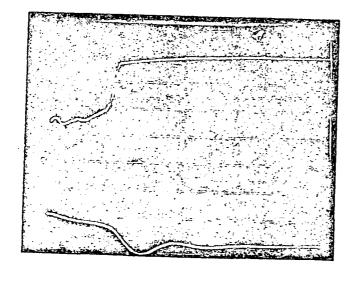


(5V) VOLTAGE/DIV: 5 V.

(2A) CURRENT/DIV: 2 A.

(2ms) SWEEP RATE: 1 m > 26.

5.10.15.2.2 Photograph of input bus current and outgas voltæge as outgas load is disabled - PRIMARY SIDE



(5V) VOLTAGE/DIV: 5V
(2A) CURRENT/DIV: 2A
(2mS) SWEEP RATE: 1,50

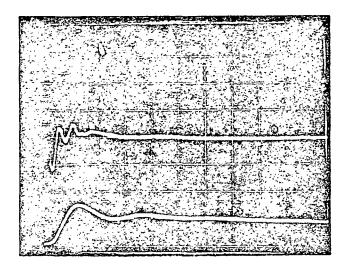


TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

FF, PARA, DESCRIPTION

5.10.15.2.2 Photograph of input bus current and outgas voltage as outgas load is enabled - REDUNDANT SIDE

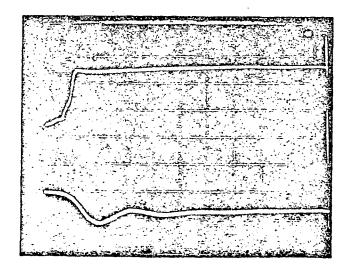


(5V) VOLTAGE/DIV: 5 V

(2A) CURRENT/DIV: 24

(500us) SWEEP RATE: 1 M366

5.10.15.2.2 Photograph of input bus current and outgas voltage as outgas load is disabled - REDUNDANT SIDE



(5V) VOLTAGE/DIV: 5 V

(2A) CURRENT/DIV: 2 A

(1mS) SWEEP RATE: 1 m/

# ORIGINAL PAGE 18 HAS TEST SEC

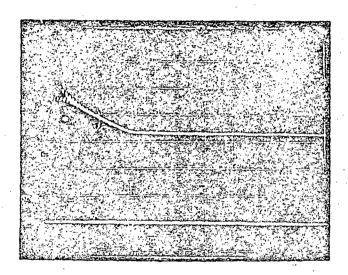
			DVM SWITCE	FE : 4782	MZASUF	PONT
1	REF. PARA.	DESCRIPTION ·	POSITION	LIMITS	PRIMARY	REDUNDAN:
	5.10.16.1	BPS voltage	S26-1, S27-1 (S27-3 for RDT)		23.046.	19) 23,80 V
	5.10.16.2	BPS current	S26-1, S27-2 (S27-4 for RDT)		20.41V	50) 21.04
	5.10.16.3	SMA Htr +output voltage	S26-2, S27-5		- 21.73V.	$\frac{21.11}{}$
	5.10.16.4	SMA Htr +load current	s26-8, s34-1		46.83-1	<b>-</b> /
	5.10.16.5	SMA Bir -output voltage	S26-2, S27-6		-22.13 V (1	+1 -22.1.
	5.10.16.6	SMA Htr -load current	S26-8, S34-2		-8.736 N	7) -8.42
	5.10.16.7	<b>⇔</b> VU output voltage	S26-3, S27-3	•	7. 631 V.	
	5.10.16.8	CDVU load current	\$26-8, \$34-10		. 2 722 V.	s) - 2763 (
	5.10.16.9	Parasitic output voltage	\$26-3, \$27-9 (\$27-1	Đ)	30.66V.	30.99 V.
	5.10.16.10	Parasitic load current	\$26-8, \$34-7	1	42.82mV. (4	4) 144.3
	5.10.16.11	Input power (5.10.16.1 x 5.10.16.2)	٠.		47.625	4 <u>8.50</u> :
	5.10.16.12	Output power ((5.10.16.3 x 5.10.16.4) + (5.10.16.5 x 5.10.16.6) + (5.10.15.7 x 5.10.16.8) + (5.10.16.9 x 5.10.16.10			17-275	1 <del>7.67</del>
	5.10.16.13	Efficiency ((5.10.16.12) ÷ (5.10.16.11)) x 100%			36 <u>-7%</u>	<u>36.4%</u>



TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

5.10.17.1 Photograph of input bus current and input bus voltage as is disable - PRIMARY SIDE

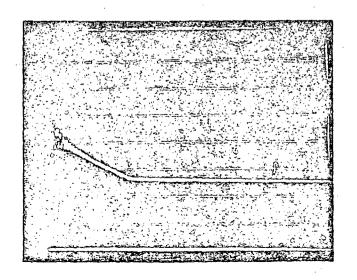


(5V) VOLTAGE/DIV: 5V.

(2A) CURRENT/DIV: 2A.

(1ms) SWEEP RATE: 1 miec.

5.10.17.1 Photograph of input bus current and input bus voltage as is disabled - REDUNDANT SIDE



(5V) VOLTAGE/DIV: 5V

(2A) CURRENT/DIV: 2A

(1ms) SWEEP RATE: 1255.



TS 16603 Rev B 18 December1980

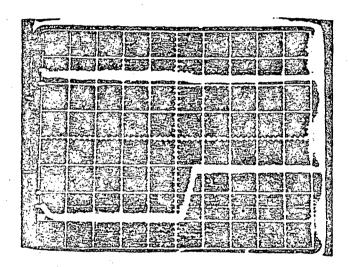
10.4 Performance test (continued)

5.10.17.2 Unit stays off (check)



Redundant

5.10.17.3 Photograph of input bus current and input bus voltage as is enabled - PRIMARY SIDE

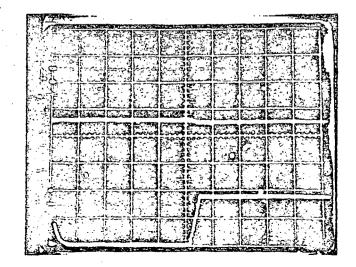


(2V) VOLTAGE/DIV: 5.

(2A) CURRENT/DIV: 2A.

(100ms) SWEEP RATE: 100 sec.

5.10.17.3 Photograph of input bus current and input bus voltage as as is enabled - REDUNDANT SIDE



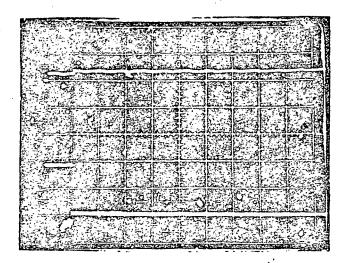
(2V) VOLTAGE/DIV: 5V
(2A) CURRENT/DIV: 2A
(100ms) SWEEP RATE: 105 - 100



TS 16603 Rev B 18 December 19

10.4 Performance test (continued)

5.10.17.4 Photograph of input bus current and input bus voltage as is disabled - PRIMARY SIDE

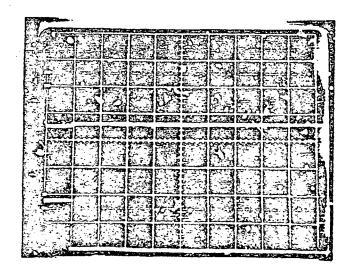


(2V) VOLTAGE/DIV: 57

(2A)- CURRENT/DIV: 2 A

(10ms) SWEEP RATE: 10 a.cc.

5.10.17.4 Photograph of input bus current and input bus voltage as is disabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: 5
(2A) CUPRENT/DIV: 2
(10ms) SWEEP RATE: 5:0.05

TS 16603 Rev B 18 December 1980

(checkmark)

10.4 Performance test (continued)

DVM SWITCH POSITIONS

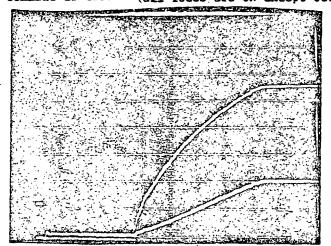
LIMITS

MEASUREMENT PRIMARY

5.10.17.5 Record that UUI operates

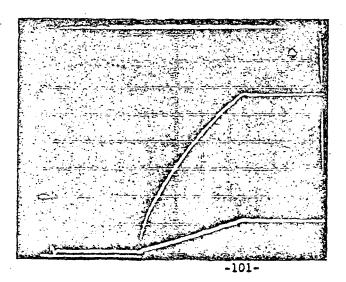
correctly.

Photograph of input bus current and MUX output voltage as MUX enable 5.10.13.1 command is issued (all loads are ON except outgas) - PRIMARY SIDE



(5V) VOLTAGE/DIV: (5A) CURRENT/DIV: (20mS) SWEEP RATE:

Photograph of input bus current and parasitic output voltage as parasitic 5.10.18.2 enable command is issued (all loads are ON except outgas) - PRIMARY SIDE



VOLTAGE/DIV: (5V) (SA) CURRENT/DIV:\_\_

(20ms) SWEEP RATE: 10-300

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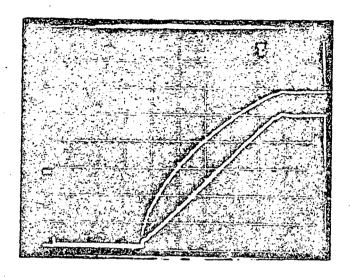


TS 16603 Rev B 18 December 1980

OF POOR QUALITY

10.4 Performance test (continued)

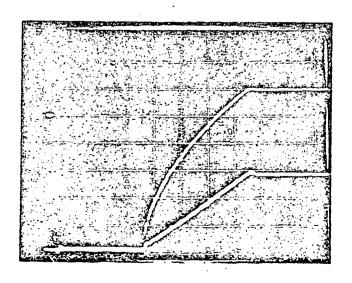
Photograph of input bus current and MUX output voltage as MUX enable command is issued (all loads are ON except outgas) — REDUNDANT SIDE 7 10.18.1



(5V) VOLTAGE/DIV: (5A) CURRENT/DIV: (20ms) SWEEP RATE: 10 ....

Photograph of input bus current and MUX output voltage as parasitic enable command is issued (all loads are CN except outgas) - REDUNDANT SIDE

> Volts/Div: \_ (5v) Current/Div: 5A\_ . (5A) (20mS) Sweep Rate: 12n5



OF POOR QUALITY S

## 10.4 Performance test (continued)

RPF PARA	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	PRIMARY	REDUNDANT
5.10.18.4	Undervoltage Trip Point (ON/OFF)	\$26-1, \$27-1 (\$27-3 for RDT)	18.0 ±1.50V	18.00 V.	18.03 V.
5.10.18.5	UUT stays OFF		•		
5.10.18.6	Undervoltage Trip Point (OFF/ON)	\$26-1, \$27-1 (\$27-3 for RDT)	19.0 ±1.50V	18.4 V	18.9
5.10.18.7	Overvoltage Trip Point	\$26-1, \$27-1 (\$27-3 for RDT)	38.0 <u>+</u> 2V	38.3 V.	38,5 V. SCN
5.10.18.8	UUT stays OFF	•	•	V	
5.10.18.9	UUI turns ON	· .			

Feb. 4, 1982

DATE Trans. Marris,

C



TS 16603 Rev B 18 December 1980

	•	•		<del></del>	
10.4	Performance test - Long	g Form	•		
PROTOFLICHT	NA OR FLIGHT	r	S/N 004	_TEMPERATURI	2: <u>[31</u> °F
IN-PROCESS_	∧/ ≠ QUAL	IV A	OR ACCEPTANCE	<u></u>	december 1994
TESTING PHA	SE Final Hot 1	Foan LI	NE VOLTAGE:	123.0	VOLTS
	•	DVM SWITCH		MEASU	REMENT
REF. PARA.	DESCRIPTION	POSITIONS	LIMITS	PRIMARY	REDUNDANT
5.10.1.1	Calibrate cmd gen		••	· V	1/
5.10.2.1	Input bus current	S26-1, S27-2		0.12001.	1222 MV
		(S27-4 for redundant)	-	•	
5.10.2.2	MUX output voltage	S26-3, S27-1	30_0 +0_90V	29.83 V.	30.31V
5.10.2.3	MUX load current	S26-3, S27-12		32.42 V.	41.39 MV
ine rest or	Section 5.10.2 require	s outh cuecking	voltage + inc	icate by che	ckmarks.
5.10.2.4.1	B1 + output voltage	526-1 527-5	in F. Trum	- 4-2 Kali	1/
5.10.2.4.2	B1 -	\$27 <b>-6</b>			./
5.10.2.4.3	B1 -	S27-5			
5.10.2.4.4	B1 +	S27-7			, simulations
5.10.2.5.1	B2 +	s27-7	·		i /
5.10.2.5.2	B2 -	S27-8			
5.10.2.5.3	B2 -	S27-8	•		
5.10.2.5.4	B2 +	S27-7		V/	
5.10.2.6.1	B3 +	S27-9			
5.10.2.6.2	вз -	S27-10			~
5.10.2.6.3	вз -	S27-10			
5.10.2.6.4	B3 +	S27-9			
5.10.2.7.1	54 +	S27-11		<b>V</b>	
5.10.2.7.2	B4 -	s27-12	•	_/_	
5.10.2.7.3	B4 <b>-</b>	\$ S27-12		<u> </u>	<u> </u>
5.10.2.7.4	B4 +	S26-1, S27-11		<u>√/</u>	
5.10.2.8.1	B5,7+	S26-2, S27-1		<u></u>	
5.10.2.8.2	B5,7-	S27-2			V .
5.10.2.8.3	B5,7-	\$27-2			<u></u>
5.10.2.8.4	85,7+	S27-1			<u></u>
5.10.2.9.1	B6 +	S27-3	يسير.	> <del>\</del>	<u></u>
5.10.2.9.2	B6 - output voltage	\$26-2, \$27-4	FENDENE.	3, -	<u> </u>
			الحالم المراجع		153



TS 15603 Rev B 10 Dicessos 1980 SRU-1 1/21/8/

PET PARA.	DESCRIPTION	DVM SWITCE POSITIONS	1.DOTS	MEASUREMENT FRIMARY REDUNDANT
	26 - output voltage	\$26-2, 527-4		$\sqrt{}$
5.10.2.9.4	# + surput veltage	\$26-2, \$27 <b>-3</b>		
5.10.2.10.1	SMA HIR + output voltage	s   S27-5		1, "
5.10.2.10.2	1 - 1	\$27 <del>~6</del>		<u> </u>
5.10.2.10.2	•	S27-6	• *•	
5.10.2.10.4	-	- ♥ 527-5		<u> </u>
5.:0.2.:2.:	-77	\$25-2, <b>\$27-7</b>		
5	±7₹	(\$17-8 for RDT)	•	$l = \frac{V}{V}$
5.10.3.12.1	+29♥	526-2, 527 <del>-9</del>		
		(\$27-11 for RDT)		1 -
5.10.2.12.2	-29₹	\$25-2, \$27 <b>-</b> 10	•	· · · · · · · · · · · · · · · · · · ·
		(\$27-12 for RDI)		
5.10.2.12.3	-29₹	\$25-2, \$27-10		1
5.10.2.12.4	SMA ETR +29V	S26-2, S27-9	•	4
5.10.2.13.1	Radiometer	\$26-3, \$27-2		1/ V
5.10.2.13.2	Radioneter	527-2	•	
5.10.2.14.1	<b>□</b> 770	\$27-3		
5.10.2.14.2	CDAL	S27-3	•	<u></u>
5.10.2.15.1	Analog +	S27-4		
3.10.2.15.2	Analog -	S27-5		
5.10.2.15.3	Analog -	S27-5		4
5.10.2.15.4	Amalog +	S27-4		<del>\</del>
5.10.2.16.1	Electromech.	S27 <del>-6</del>		11
5.10.2.16.2	Electromech.	- <b>∳</b> 527-6		<del>\\\</del>
5.10.2.17.1	Curgas output voltag	a \$26-3, \$27-7		<u> </u>
5.10.3.1	Bus voltage	S26-1, S27-1		24 1700
	·	(S27-3 for RDI)		28,cm (49)25.02
5.10.3.2	MUX load current	526-3, 527-12	4.130 ±0.92	SA 4125-00 4/131000
5.10.3.3	Bus current	S26-1, S27-2		172 8 aV
		(\$27-4 for EDT)		132.8 - (50) 1324914V
5.10.3.3.2	3PS Voltage	.526-1, 527-1 527-3)		28.09 V 28.02
5.10.3.3.3	SPS Current	_\$26-1, \$27-2 (\$27-4)		132.09. V. 132.2900
5.10.3.3.4	MUX Current	526-3, 527-12		41 12-1. 41.71 med
		-67-		154



## TS 16603 Rev B 18 December 1980

			4		• •
	DESCRIP	TTON	DVM SWITCE POSITIONS	LIMITS	MEASUREMENT PRIMARY REDUNDANT
REF. PARA.	DESCRII	22011	1001110110	14111	
5.10.3.4.1	B1 + outpu	t voltage	<b>\$26-1, \$27-5</b>	20.50 ±2.500	20.65 V. (1) 20.72V
5.10.3.4.2	B1 + outpu	t ripple	Look on Scope	≪600 mV pk-pk	20 -V 20 mi
5.10.3.4.3	B1 - oucpu	t voltage	<b>526-1, 527-6</b>	-20.50 ±2.50V	-20.75
5.10.3.4.4	B1 - outpu	t ripple .	Look on Scope	≪600 mV pk-pk	30 N. 20 mi
5.10.3.5.1	B2 + outpu	t voltage	S26-1, S27-7	20.50 ±2.300	20.44 V. (3) 20.55 V
5.10.3.5.2	B2 + outpu	c ripple	. Look on Scope	≪500 mV pk-pk	25 N. 20m V
5.10.3.5.3	B2 - outpu	t voltage	S26-1, S27-8	-20.50 <u>+</u> 2.50V	20.47 V. (4) - 30,57
5.10.3.5.4	B2 - outpu	t ripple	Seen on Scope	<600 mV pk-pk	20 -1. 20
5.10.3.6.1	B3 + outpu	t voltage	S26-1, S27-9	20.50 ±2.50V	20.55 V. (5) 25.48
5.10.3.6.2	B3 + outpu	t ripple	Seen on Scope	≪00_aV pk-pk	. 20 v. 23
5.10.3.6.3	B3 - outpu	t voltage	\$26-1, \$27-10	-20.50 ±2.50V	-20.47 V. 15 20.58
5.10.3.6.4	B3 - outpu	t ripple	Seen on Scope	≪600 mV pk-pk	20 1 20
5.10.3.7.1	В4 + оптри	t voltage	S26-1, S27-11	20.50 ±2.50V	2066 17 26.72
5.10.3.7.2	B4 + outpu	r ripple	Seen on Scope	≪600 mV pk-pk	20 1 20
10.3.7.3	B4 - cutpu	t voltage	S26-1, S27-12	-20.50 <u>+</u> 2.507	-W.13 V (8) 20.73
5.10.3.7.4	B4 - putpu	t ripple	Seen on Scope	≪500 mV pk-pk	75 1.00
5.10.3.8.1	B5,7 ÷	voltage	\$26-2, S27-1	20.50 ±2.507	20.15 V (9)20,22
5.10.3.8.2	B5,7 + -	ripple	Seen on Scope	≪600 aV pk-pk	30 LV. 30
5.10.3.8.3	25,7 -	voltage	\$26-3, \$27-2	-20.50 ±2.50V	2017V (10) 20125
5.10.3.8.4	B5,7 -	ripple	Seen on Scope.	≪500 mV pk-pk	35 A. 40.
5.10.3.9.1	B6 +	voltage	<b>\$26-2, \$27-3</b>	20.50 ±2.50V	20.534 (11) 20,58
5.10.3.9.2	:B6 +	ripple	Seen on Scope		20 av 20
5.10.3.9.3	36 -	voltage	S26-2, S27-4	-20.50 ±2.50V	- 20.53V. (12) 20.60
5.10.3.9.4	B6 -	ripple	Seen on Scope		20 N 20
5.10.3.10.1	SMA Htr +	voltage	\$26-2, \$27-5	21.20 ±2.12V	22.31 1(13) 22.48
5.10.3.10.2	SMA Htr +	ripple	Seen on Scope	≪530 mV pk-pk	202V. 20.
5.10.3.10.3	SMA Atr -	voltage	S26-2, S27-6	-21.20 <u>+</u> 2.12 V	-22.14 (14) 22.96
5.10.3.10.4	SMA Htr -	ripple	Seen on Scope	<630 mV pk-pk	20 .
5.10.3.11.1	SMA +7V T	voltage	\$26-2, \$27-7 (\$27-8 for RDT)	7.10 ±0.80V	7 70 FV (15) 7. 78
5.10.3.11.2	SMA +7V OU	tput ripple	Seen on Scope	√210 aV pk-pk	20.11 30



Ts 16603 Rev B 18 Docamber 1980

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RET PARA	PESCRIPTION	POSITIONS POSITIONS	LIMITS	MEASUREMENT PRIMARY REDUNDANT
5_10.3.12.1	SMA +29V output voltage	S26-2, S27-9 (S27-11 for RDT)	29.50 <u>+</u> 1.56V	30.50 (16) 30.62
5.10.3.12.2	SMA +29V ripple	Seen on Scope	≪70 aV, pk-pk	40 -V. 30
5.10.3.12.3	SMA -29V voltage	S26-2, S27-10 (S27-12 for RDT)	-29.50 ±1.50V	30 488 (17)-30.69
5.10.3.12.4	SMA -29V ripple	Seen on Scope	<870 m√ pk-pk	50.V. 50
5.10.3.13.1	MIX Aoltule	S26-3, S27-1	30.00 ±0.907	30.184. (18) 30.32
5.10.3.13.2	MUX ripple	Seen on Scope	<900 m√, pk-ph	+5 nV. 50
5.10.3.14.1	Radiometer voltage	S26-3, S27-2	8.50 ±0.857	7.707 1 (19) 8,669
5.10.3.14.2	Radiometer ripple	Seen on Scope		30-10 40
5.10.3.15.1	CDVU voltage	S26-3, S27-3	8.00 ±0.80V	1:101 (20) 7.765
5.10.3.15.2	CDVU ripple	Sees on Scope	√40 mV pk-pk	20-V. 20
5.10.3.16.1	Analog + voltage	526-3, S27-4	21.20 ±2.12V	21.510 (21)27.55
5.10.3.16.2	Amalog + ripple	Seem on Scope	≪30 aV pk-pk	30 N. 20
10.3.16.3	Analog - voltage	S26-3, S27-5	-21.20 ±2.127 -	2.591 625 2261
10.3.16.4	Anglog - ripple	Seen on Scope	<630 mV pk-pk	20nv. 26
5.10.3.17.1	Electromech. voltaga	S26-3, S27-6	33.40 ±3.347 🔾	3.14 V. 03 33.32
5.10.3.17.2	Electromech. Tipple	Seen on Scope	O.OV pk-pk	30-V 50
5.10.3.18.1	Outgas V voltage	S26-3, S27-7	100.0 <u>+</u> 12.07	V5.42 V. 164.40
5.10.3.18.2	Outgas output ripple	Seen on Scope	<.00 pk-pk	150 -V. 150
5.10.4.1	Input current telemetry	S26-4, S28-2 (S28-4 for EDT)		3.924: 3.936
5.10.4.2.1	Band 1 + volt. telemtry	S26-4, 528-5		3.772 V. 3.793
5.10.4.2.2	Bend 1 -	S28-6	:	1.761 V 3.775
5.10.4.3.1	Band 2+	S28-7	3	124V 3.750
5.10.4.3.2	Band 2-	S28-8	3	,712V. 3.725
5.10.4.4.1	Bond 3+	528-9		3. <u>742</u> V. 3 <u>:77</u> 3
5.10.4.4.2	Band 3-	S28-10		3. <u>7371</u> . 3 <u>75</u> 0
5.10.4.5.1	Bood 4+	S28-11	3	1.743V. 3.768
5.10.4.5.2	Band 4-	S26-4, S28-12	3	753V. 3770
5.10.4.6.1	Band 5,7+	S26-5, S28-1	3.717 -	3.767 " 3.710
5 10.4.6.2	Band 5,7- volt. telemetr	y \$26-5, \$28-2	3	.107V 3.688



TS 16603 Rev B 18 December 1980

	· ,	Sep. 61110677		
REF. PARA.	DESCRIPTION	POSITIONS	LIMITS	MPASUREMENT PRIMARY REDUNDANT
		006 5 620 2		
5.10.4.7.1	Band 6 + volt. telemtry	\$26-5, \$28-3	•	
5.10.4.7.2	Band 6 -	528-4	•	
5.10.4.8.1	SMA Htr +	S28-5		- Landard Company
5.10.4.8.2	SMA Htr -	S28-6	• •	4.1414. 4.160
5.10.4.9	SMA ÷7V	S26-5, S29-7 (S27-8 for RDT)	•	4.9274. 4.998
5.10.4.10.1	SMA +29V	S26-5, S28-9 (S27-11 for RDT)	1	4.181V. 4.723
5.10.4.10.2	SMA -29V	\$26-5, \$28-10 (\$27-12 for RDT)	•	3,798 V. 3.852
5.10.4.11	MUX	S26-6, S28-1	•	4.5114. 4.799
5.10.4.12	Radiometer	S26-6, S28-2	• • • •	· 4.7820. 4.759
5.10.4.13	CDAA	S26-6, S28-3	•	4.310 V. 71.365
5.10.4.14.1	Analog + volt. telentry	S26-6, S28-4		4.023 V. 4.030
5.10.4.14.2	Analog -	S26-6, S28-5		3951 V. 3 857.
.10.4.15	Electronech.	<b>528-6</b>		4.068 V. 4.59Z
5.10.4.16	Outgas volt. telemetry	S26-6, S28-7		5.298 V. 5220
5.10.5.1.1	Analog + load current	\$26-3, \$27-11 mV	- 10 = Amps	15.685 20 py 15.770
5.10.5.1.2	MUX	\$26-3, \$27-12 mV	÷ 10- Amps	41.36 (25)41.23
5.10.5.1.3	Band 1 +	\$26-7, \$34-1 mV	÷ 0.5 = mA	92.77 100 92.14 m
5.10.5.1.4	Band 1 -	\$34-2	1	1.94 (27) 92.37
5.10.5.1.5	2 +	s34 <b>-</b> 3	1	70.66 00) 77:7
5.10.5.1.6	2 -	S34-4		-41,52 (29) 91.96
5.10.5.1.7	3 +	S34-5	]	71,50 60) 91.28
5.10.5.1.8	3 -	s34 <b>-</b> 6		-1127 by 91.71
5.10.5.1.9	4 +	s34 <b>-</b> 7		91.60 (1) 92.15
5.10.5.1.10	4 -	s34 <b>-</b> 8		71.29 (2)91.77
5.10.5.1.11	5,7 +	S34-9	- · ·	1 7.1 9152 (H) 90,93
5.10.5.1.12	5,7 -	s34-10		-90.65 ps) G0,27
5.10.5.1.13	6 +	\$ 534-11	1	47.72 10.47.83
5.10.5.1.14	Band 6 -	526-7, S34-12	7	47.55 07)47.72
3.10.5.1.15	SMA Htr +	S26-8, S34-1 mV	÷ 0.5 = mA	48.24 DB) CIG, 46
	SMA Htr - load current			7.022 09 9,70



#### TS 16603 Rev B

EEN-2 7-6-81 SCAU-3 11/3/8/

#### 10.4 Performance test (continued)

	• • • • • • • • • • • • • • • • • • • •	<b>63</b> 0	<b>₹</b> ₹	/ = / = /
REF. PARA.	DESCRIPTION	POSITIONS	LIMITS	HEASUREHENT FRIDARY REDUNDAN
5.10.5.1.17	SMA +29V load current	526-8, 534-3 m	V ÷ 0.402 = =4	
5.10.5.1.18	SMA -29V	-	7 ÷ 0.402 = mA	
5.10.5.1.19	SMA +7V	534-5	7 ÷ 0.1 = Amps	.2777 V. (42), 290 V
5.10.5.1.20	Analog -		7 ÷ 0.402 = mA	
5.10.5.1.21	Radiometer	S34-9 m	7 ÷ 0.5 = mA	155.72 .1 (4) 155.00
5.10.5.1.22	CDVU :	8 S34-10 m	V ÷ 0.5 = mA	.2734 V. (85) . 277 V
5.10.5.1.23	Electromech, load current	526-8, \$34-11 m	F ÷ 0.402 ≈ mA	.2107 V. (46)1212 V
5.10.5.2.1		\$26-1, \$27-1 (\$27-3 for RDT)		28.09 V \$7)25.036
5.10.5.2.2	Bus input current	S26-1, S27-2 m (S27-4 for RDT)	√ ÷ 10 = Amps	132.78-1 (48) 132.55.
5.10.5.2.3	PIN (Section 5.10.5)			372,979 371.621
5.10.5.2.4	P <sub>IN</sub> (Section 5.10.3)			370.44 371.236
5.10.5.2.5	PIM (SAE)			371.71 371.429
5.10.5.2.9	Input current at current l	imit	26-1, 27-2 (26-1 27-4 R	it) - 27.71 198.65,
	Input voltage at current l	imit	27-1 (27-3 R	ic) 30.244 growth
•	MUX voltage at current lin	sit	26-3, 27-1	54.17 N. of 16.79
	MUX current at current lin	ait .	27-12	162.45 N. 46.75 M
5.10.5.3.1	Pour		•	272.896 273.81
5.10.5.3.2	Efficiency	• •	>70%	73.91 -24-21
•			•	
•				74.212
•				6. 8605000
•	.₩₽97 ₽06EP #1=	უუ <u>ა</u> ცუყდა		7.1/82
	THRUT POWER #1=	370 44 P= 374 7:		7"



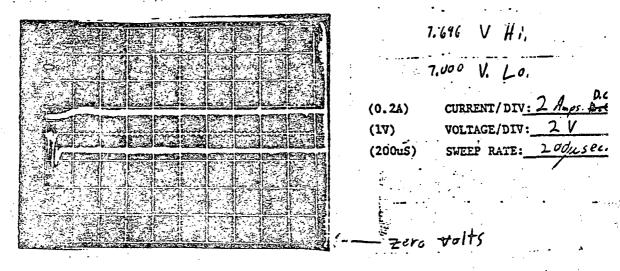
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

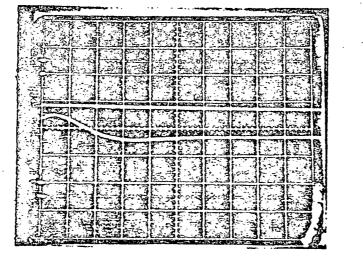
B : 172

REF. PARA, DESCRIPTION		LIMITS	PRIMARY REDUNDAN
5.10.6.1 +7V output pulse	d S26-2, S27-7 (S27-8 for RDT)	7.10 <u>+</u> 0.80V	1.001 V. 7.1134

5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V output is being pulse-loaded-PRIMARY SIDE



5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as pulse-load on SMA +7V outputs is being removed - PRIMARY SIDE





TS 16603 Rev B 18 December 1980

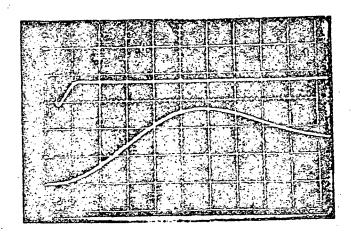
G 3 47

10.4 Performance test (continued)

REF. PARA

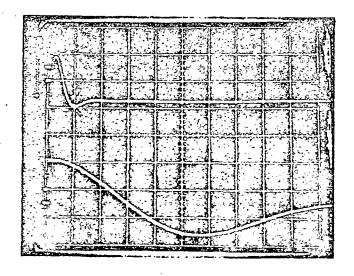
DESCRIPTION

5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V output is being pulse-loaded-REDUNDANT SIDE



(D.ZA) CHRENT/DIV: <u>ZA A.C.</u>
(IV) VOLTAGE/DIV: //
(ZEDUS) SHEEP RATE: ZCOLLOR

5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as pulse-load is being removed-REDUNDANT SIDE



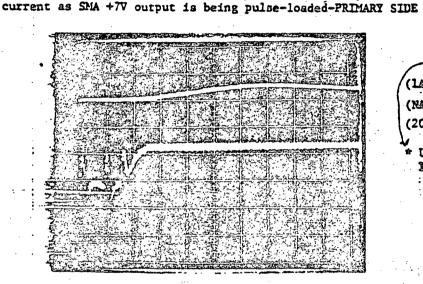
(0.2A) CURRENT/DIV: <u>2A</u> A.C.
(1V) VOLTAGE/DIV: <u>1U</u>
(200us) SWEEP RATE: <u>2CC</u> (100C)



TS 16603 Rev B 28 December 1880 Sect Z 9-6-81

#### 10.4 Ferfurgates test (continued)

REF. PARA.	DESCRIPTION	POSITIOSS	LIMITS	MPASURPMENT PRIMARY REDUNDAN
5.10.6.3	Input bus current	826-1, S27-2 (S27-4 for MOT)		137.87 135.25n
5.10.6.4	SMA +7V IM- pulsed	S26-5, S28-7 (S28-8 for RDT)		4.10 9 m 4.697 6
5.10.6.5	SMA +7V load current- pulsed	(\$26-8, \$34-5	•	.4560V ,46211
5.10.6.6	Photograph of transferts	= induced on innut h		1 FMA ±317 1 3



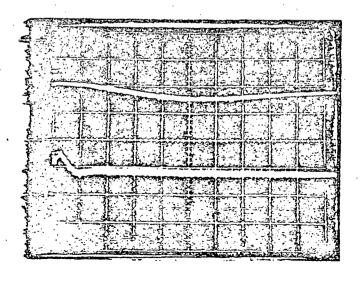
(1A) SMA CURRENT/DIV: 100 mV.

(NA) BUS CURRENT/DIV: 1 A-o. A.C.

(200us) SWEEP RATE: 200 u sec.

\* Using 0.1 . shunt and 100 mV/Div on scope

5.10.6.6 Photograph of transients induced on input bus current and SMA +7V load current as pulse-load is being removed-PRIMARY SIDE



(1A) = SMA CURRENT/DIV: 100\_V
(EA) BUS CURRENT/DIV: 1\_\_\_

(200us) SWEEP RATE: 100 uses

\*Using 0.1\_shunt and 100mV/Div on Scope

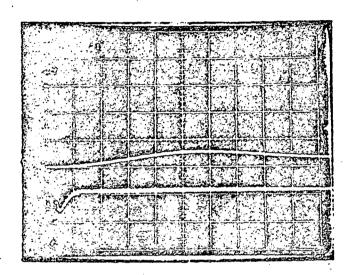
TS 16603 Rev B <del>18 December 1986</del> **SCH-2 7-6-81** 

#### 10.4 Performance test (continued)

REF, PARA,

DESCRIPTION

5.10.6.6 Photograph of transients induced on input bus current and SMA + 7V load current as SMA + 7V output is being pulse loaded - REDUNDANT SIDE



(1A)\* SMA CURRENT/DIV: 100m V

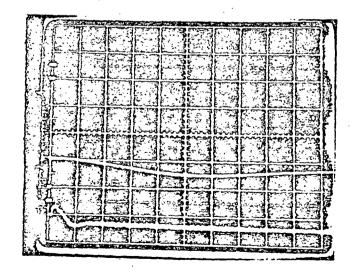
(2A) BUS CURRENT/DIV: 7 A

(200us) SWEEP RATE: 230 August

\*Voing 0.1 shunt and 100 mV/Div on scope.

8

5.10.6.6 Photograph of transients induced on input bus current and SMA + 7V load current as pulse-load is removed - REDUNDANT SIDE



(1A) \* SMA CURRENT/DIV: 100 m U

(2A) BUS CURRENT/DIV: 1A

(200us) SWEEP RATE: 200 m U

\*Using 0.1 \_\_\_\_hunt and 100mV/Div on scope.

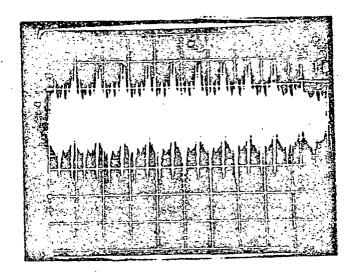
OF POOR QUALITY ST

TS 16603 PRev B 18 December 1980

10.4 Performance test (continued)

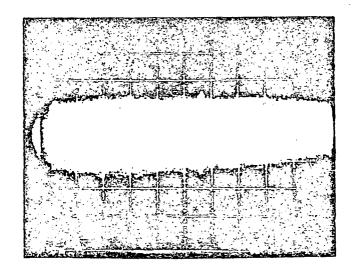
F. PARA.

5.10.7.1 Photograph of reflected input current ripple - PRIMARY SIDE



(1mA) CURRENT/DIV: 2 mA. A
(10mS) SERFER HATE: 10.000

5.10.7.1 Photograph of reflected input current ripple - REDUNDANT SIDE



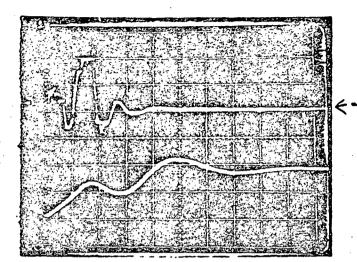
(1ma) CURRENT/DIV: 2-A. 4
(10us) SWEEP RATE: 10 10 100

Input current - full load S26-1, S27-2 5.10.8.1.1 (S27-4 for RDT)



:5.10.8.1.2 Input current w/o analog load

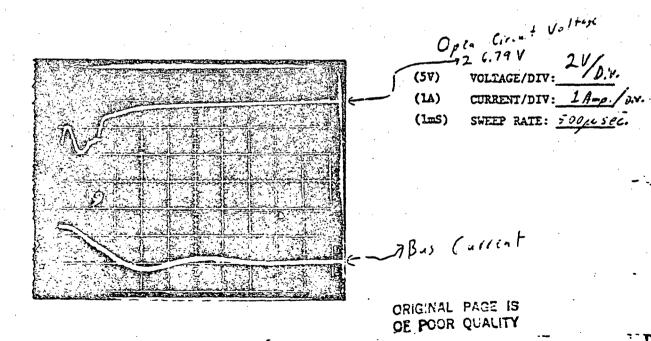
Photograph of transients induced on input bus current and analog + voltage as 5.10.8.1.3 analog output is enabled - PRIMARY SIDE



Output Voltage - Londed 722.50

VOLTAGE/DIV: 2 1/0.v. ·(2Ÿ) CURRENT/DIV: 14-1-/0.4 (1A)· (500us) SWEEP RATE: 500 MSEC.

5.10.3.1.3 Photograph of transients induced on input bus current and analog + voltage as enalog output is disabled - PRIMARY SIDE



TEST S 30

TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

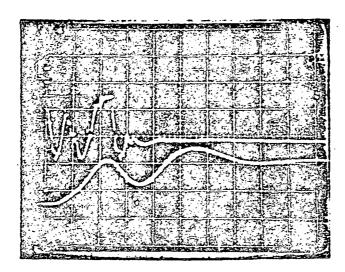
REF. PARA.

C

٤.

DESCRIPTION

5.10.8.1.3 Photograph of transients induced on imput bus current and amales + output voltage as analog output is enabled - MEDURDANT SIDE.

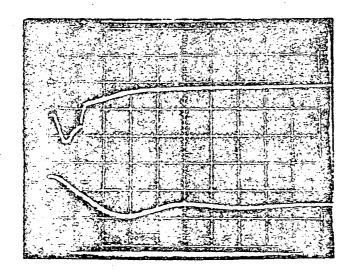


(2V) VOLTAGE/DIV: 70

(14) CURRENT/DIV: 1/7

(500us) Some BATE: Society

5.10.8.1.3 Photograph of transients induced on imput bus current and analog + output voltage as analog output is disabled - HEDUNDANT SIDE.



(5V) VOLTAGE/DIV: 20

(la) curent/div: 14

(les) Sweet BASE: Stormer

HAC TEST S 30 TS 16603 Rev B 18 December 1980

#### 10.4 Performance test (continued)

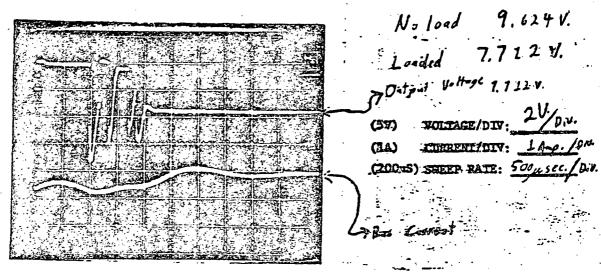
\S 30	•			DCL .
ক <b>্র</b> াক		•	-	
			HEAST	REPT
THUTS		PRI	MARY	REL

DVM SWITCH
TF. PARA. DESCRIPTION POSITIONS LIMITS PRIMARY REDUNDANT

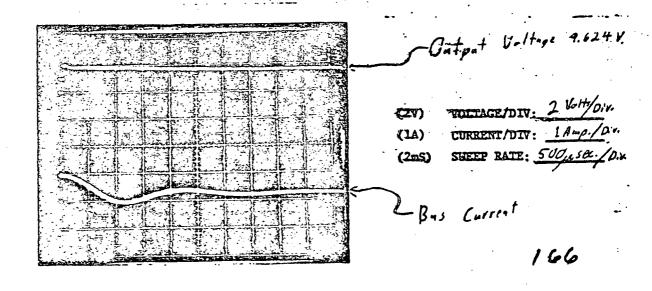
5.10.8.2.1 Input bus current w/o SMA S26-1, S27-2
+7V load (S27-4 for RDT)

5.10.8.2.2 Photograph of transients induced on input bus current and SMA +7V output

5.10.8.2.2 Photograph of transients induced on input bus current and SMA +TV output voltage as SMA +TV is anabled - PRIMARY SIDE.



5.10.8.2.2 Photograph of transients induced on input bus current and SMA-+7V output voltage as SMA +7V is disabled - PRIMARY SIDE.



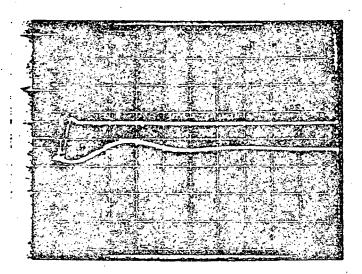
HAC TEST S30 TS 16603 Rev B 18 December 1980

#### 10.4 Performance test (continued)

PEF. PARA

DESCRIPTION

5.10.8.2.2 Photograph of transients induced on input bus current and SMA +7 output voltag s SMA +7V is enabled - REDUNDANT SIDE

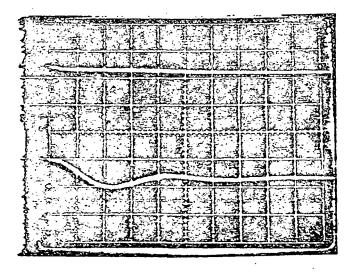


(5V) VOLTAGE/DIV: 2 U

(1A) CURRENT/DIV: 1 A

(200us) SWEEP RATE: 500 .....

i.10.8.2.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V is disabled - REDUNDANT SIDE



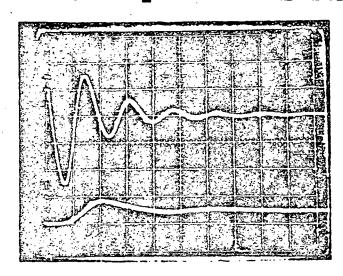
(2V) VOLTAGE/DIV: 21/ (1A) CURRENT/DIV: 1/A (2ms) SWEEP RATE: 500,4442



TS 16603 Rev B 18 December 1980

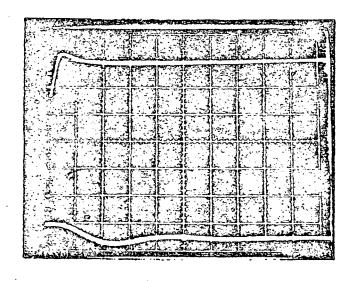
#### 10.4 Performance test (continued)

EF, PARA,	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	Meas Primary	UREMENT REDUNDANT
5.10.8.2.3	Input bus current w/o SMA ±29V load	S26-1, S27-2 (S27-4 for RDT)	1	28.93 N.	12 <u>8.46</u> mv
5.10.8.2.4	Photograph of transients voltage as SMA +29V is a	s induced on input bu	s current a	ed SMA +29V o	utput



(2V) VOLTAGE/DIV: 1.0 V./D.V.
(0.5V) CURRENT/DIV: 0.5 Aug. fav.
(1ms) SWEEP RATE: 500 justic/fav.

5.10.8.2.4 Photograph of transients induced on input bus current and SMA +29V output voltage as SMA +29V is disabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: 1.0 V/p.v.
(0.5A) CURRENT/DIV: 0.5 Amps. p.v.
(1ms) SWEEP RATE: 500, 50. p.v.



TS 16603 Rev B 18 December 1980

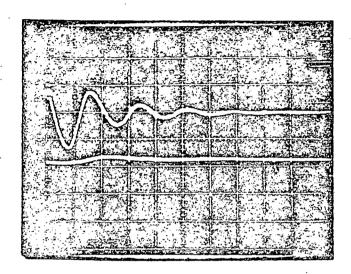
10.4 Performance test (continued)

EF PARA.

C

DESCRIPTION

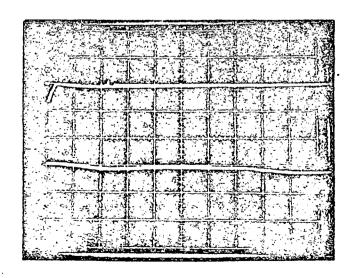
5.10.8.2.4 Photograph of transients induced on input bus current and SMA +29V output voltage as SMA +29V is enabled - REDUNDANT SIDE



(0.5A) CURRENT/DIV: 1A

(lis) SWEEP RATE: 500

5.10.8.2.4 Photograph of transients induced on imput bus current and SNA +29V output voltage as +29V is disabled - REDUNDANT SIDE



(2V) VOLIAGE/DIV: <u>3 V</u> - (0.5) CURRENT/DIV: <u>1 A</u>

(Ims) SWEEP RATE: SOCIO



TS 16603 Rev B 18 December 1980

10.4 Performance test (continue

DESCRIPTION

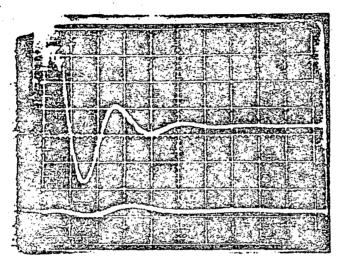
•	183 1782	
DVM SWITCH		MEASUREMENT
POSITIONS	LIMITS	PRIMARY REDUNI

5.10.8.3.1 Input bus current w/o CDVU load

EF. PARA.

S26-1, S27-2 (S27-4 for RDT) 131.03-V. 130.20 MU

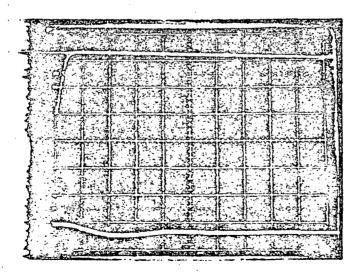
5.10.8.3.2 Photograph of transients induced on input bus current and CDVU output voltage as CDVU is enabled - PRIMARY SIDE



Loaded 7.647V. Unloaded 9.460 V.

(2V) VOLTAGE/DIV: 1.0 V./D.V.
(0.5A) CURRENT/DIV: 0.5 Amps./D.V.
(1ms) SWEEP RATE: 500,

2.10.8.3.2 Photograph of transients induced on input bus current and CDVU output voltage as CDVU is disabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: 1.0 V/V.V.

(0.5V) CURRENT/DIV: 0.5 A-p./D.V.

(1ms) SWEEP RATE: 500,2500/D.V.



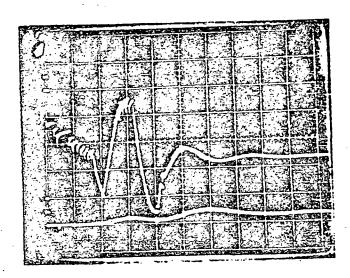
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

EF. PARA

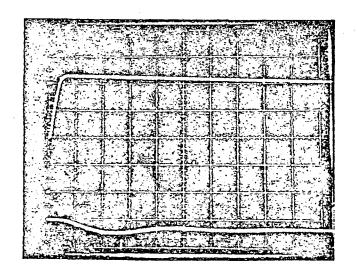
DESCRIPTION

5.10.8.3.2 Photograph of transients induced on input bus current and CDVU output voltage as CDVU is enabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: 1 V
(0.5A) CURRENT/DIV: 5/4
(1ms) SWEEP RATE: 500 Last

5.10.8.3.2 Photograph as transients induced on input bus current and CDVU output voltage as CDVU is disabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: /V
(0.5A) CURRENT/DIV: /5/2
(1ms) SWEEP RATE: Soc week



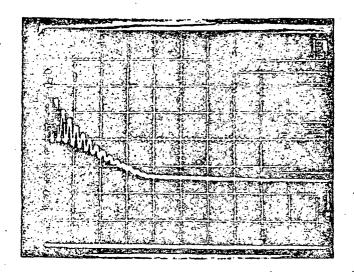
TS 16603 Rev B 18 December 1980

#### 10.4 Performance test (continued)

'EF. PARA.

DESCRIPTION

5.10.9.1 Photograph of turn-off transient of input bus voltage and input bus current as bus voltage is removed - PRIMARY SIDE

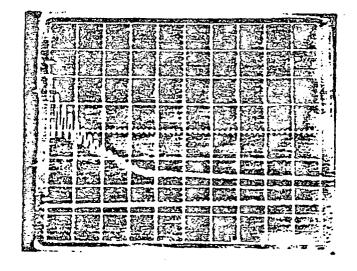


(5V) VOLTAGE/DIV: 51/mp/DIV.

(5A) CURRENT/DIV: 51/mp/DIV.

(50Des) SHEEP RATE: 500 µ 500 for

Photograph of turn-off transient of input bus voltage and input bus current as bus voltage is removed - REDUNDANT SIDE



(5V) VOLTACE/DIV: 5V./D.V.

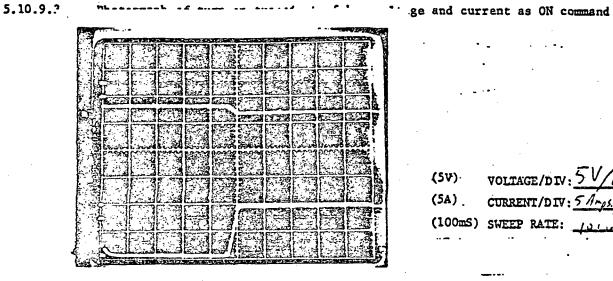
(5A) CURRENT/DIV: 5/2-As./D.V.

(500us) SWEEP RATE: 500 pises./Div.

TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

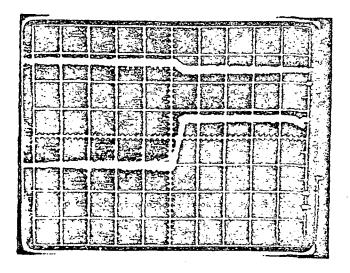
REF. PARA.	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	MEASI PRIMARY	UREMENT REDUNDANT
5.10.9.2	UUT stays off when bus is reapplied.	S1-ON (S2-ON for RDT)	••		V



(5¥)· VOLTAGE/DIV: 5 V/D.V. (5A) CURRENT/DIV: 5 Args.

(100mS) SWEEP RATE:

5.10.9.3 Photograph of turn-on transient of bus voltage and current as ON command is issued - REDUNDANT SIDE



(5V) VOLTAGE/DIV: 50

CURRENT/DIV: 5 79 (5A)

(100ms) SWEEP RATE: /CCins



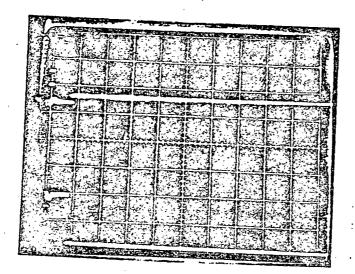
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

EF. PARA.

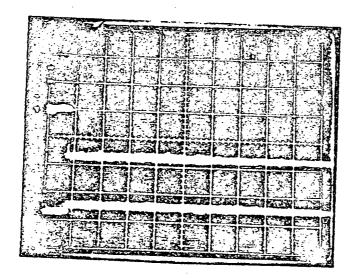
. .

5.10.9.4 Photograph of turn-off transient of input bus voltage and current as OFF command is issued - PRIMARY SIDE



(5V) VOLTAGE/DIV: 5V
(5A) CURRENT/DIV: 5A
(10ms) SWEEP RATE: 10 AS

5.10.9.4 Photograph of turn-off transient of input bus voltage and current as OFF command is issued - REDUNDANT SIDE



(5V) VOLTAGE/DIV: 5V
(5A) CURRENT/DIV: 5A
(10ms) SWEEP RATE: 14 m 5



TS 16603 Rev B 18 December 1980

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#### 10.4 Performance test (continued)

	10.4	Performance test (continued	<u> </u>		_	
REF.	PARA.	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	PRIMARY	REDUNDANT
5.10	.9.5	Record	\$27-2 (\$27-4)	-	132.54	129.99,
5.10		Record	(S27-4 (S27-2)	•	2.466	2219mv
		Record	\$27-2 (\$27-4)			
				•	127.63	106,07 m
5.10	.9.7	Record that UUT turns on.	(Checkmark)		· <u> </u>	1
5.10	.10.1	Input bus current AFTER it reads ~ 17A AND input bus voltage reads ~ 21V.	S26-1, S27-2 (S27-4 for RDT)		150.96	1 <u>50.14</u> mv
5.10	.10.2	Input bus voltage with 17.0A load	S26-1, S27-1 (S27-3 for RDT)	. •• .	28,00	28.02
5.10	.10.3	Imput current telemetry output	S26-4, S28-2 (S28-4 for RDT)		4324	4.487
5.10	.10.4	Imput current telemetry output	S26-4, S28-2 (S28-4 for RDT)	. <b></b> .	3 <u>.5 5</u>	3543
		Input bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)	-	Z8.00	23102
		Input bus current	\$26-1, \$27-2 (\$27-4 for RDT)		12635	124,1540
5.10	.10.5	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)		3.054	3.076
		Input bus voltage	S26-1, S27-1 (S27-3 for RDT)		2 <u>8.00</u>	38.00
		Input bus current	S26-1, S27-2 (S27-4 for RDT)		109.40	159.31mV
5.10	.10.6	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)		2,537	<u>2,57</u> 0
		Input hus voltage	S26-1, S27-1 (S27-3 for RDT)		28.00	25.07
		Input bus current	S26-1, S27-2 (S27-4 for RDT)		92.18	93.7000
5.10	.10.7	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)		2.072	7.015
		Input bus voltage	S26-1, S27-1 (S27-3 for RDT)		28:08	2 <u>9.00</u>
		Input bus current	S26-1, S27-2 (S27-4 for RDT)		50115	75,47mi

#### FAC TEST S 30

TS 16603 Rev B 18 December 1980

#### 10.4 Performance test (continued)

•			FE 3 472	•	
REF. PARA.	DESCRIPTION	DVM SWITCE POSITIONS	LIMITES	efast Primary	RESENT REDUNDARI
5.10.10.8	Imput correct telementy	S26-4, S28-2 (S28-4 for EDT)		1 <u>.53</u> 2	
	Imput bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)	•	28.02	28.01
•	Imput bus carrent	\$26-1, \$27-2 (\$27-4 for RDT)		63.67in	161.56m.
5.10.10.9	luput current telemetry output	\$26-4, \$28-2 (\$28-4 for EDT)		1.016	•
	Imput bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)		2 <u>5.00</u>	<u> 25.0</u> 3
	Input bus current	526-1, S27-2 (S27-4 for RDT)		43.39m	41.93mi
5.10.10.10	laput current telemetry output	\$26-4, \$28-2 (\$28-4 for RDT)		ISGUV	1474 6
·.	Impur bus voltage	\$26-1, \$27-1 (\$27-3 for KDT)		28,00	
	Imput bus surrest	\$26-1, \$27-2 (\$27-4 for EDT)		31,66m	29,44 mi
5.10.10.11	Japus carrent telemetry output	\$26-4, \$28-2 (\$26-4 for RDT)			12046V
	Imput bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)		28.00	-
	Taput bus current	\$26-1, \$27-2 (\$27-4 for RDT)			21.79m0
5.10.10.12	Imput current telemetry output	\$26-4, \$28-2 (\$26-4 for RDT)	· •••	-/ <u>36,2</u> 8	
	Input bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)	. :	28.08	
,	Input bus current	\$26-1, \$27-2 (\$27-4 for RDT)	i . ·	111724	
5.10.11.1	Band 1+ ourpur voltage	S26-1, S27-5		23.47	23.91
5.10.11.2	Band 1- output voltage	527-6	<b>.</b>	一 <u>23.54</u> .	- <u> ,72,4</u> 2
5.10.11.3	2÷	S27-7		23.44	23.29
5.10.11.4	2~	S27-8		-3395	23.73
5.10.11.5	3+	S27-9		23.30	
. 3.10.11.6	3- 4	\$ S27-10		-23.19 -	
5.10.11.7	Bend 4+ ourput voitage	526-1, 527-11	•	23.99	23,84



TS 16603 Rev 8

#### 10.4 Parformance tost (continued)

REF. PARA,	DESCRIPTION	DVH SUITCE POSITIONS	LIMITS	PRASURPISENT PRIMARY REDUNDAN
5.10.11.8	Band 4- output voltage	S26-1, S27-12		- 23.54-23.59
5.10.11.9	5,7+	S26-2, S27-1	•	23.12 23.40
5.10.11.10	5,7-	S27-2		- 23.06 - 23.25
5.10.11.11	6+	S27-3		22.79 23.11
5.10.11.12	Band 6-	S27-4		-23:30 -23.36
5.10.11.13	SMA Htr +	S27-5	•	24.51 25.24
5.10.11.14	Htr -	·\$27 <b>-</b> 6		-75.33 -7539
5.10.11.15	+7V	\$2 <b>7-</b> 7		9.727 N/A
5.10.11	+7v	(S27-8 For RDT)		N/A 9.334
5.10.11	+29V	S27-9		32.39 N/A
5.10.11	+29V	(S27-11 For RDT)		N/A 32.72
5.10.11	-29V	S27-10		-32.84 N/A
	SMA -29V	S26-2, (S27-12 for RDT)	·	N/A -32.51
5.10.11.18	Radiometer	S26-3, S27-2		9:768 9.942
5.10.11.19	CDVU	S27-3	,	9.555 9.590
5.10.11.20	Analog +	S27-4		27.07 27.50
5.10.11.21	Analog -	S27-5		-7559 -25.87
5.10.11.22	Electromech.	S27-6	1	41.55 41.22
5.10.11.23	Outgas	S27-7		103.95 102.63
5.10.11.24	Parasitic +	S27-9	•	31.07 N/A !
	Parasitic output voltage	S26-3, (S27-10 for RDT)	•	N/A 31.66
5.10.11.25	Band 1+ TM output	S26-4, S28-5		4.269 4.369
5.10.11.26	1-	\$28-6		4279 4256
5,10,11,27	2+	S28-7		4.357 4.240
5.10.11.28	2-	S28-8		4,333 4,394
5.10.11.29	3+	S28-9		4,603 4,330
5.10.11.30	3-	S28-10		4.223 4.271
5.10.11.31	. 4+ .	S28-11		4.337 4.328
5.10.11.32	4-	\$26-4, \$28-12		4.275 4.254
5.10.11.33	Band 5,7+ TM output	\$26-5, \$28-1	•	4,215 4,276



TS 16603
Rev B

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BCd-2 P-6-81

#### 10.4 Performance test (continued)

		TOTAL BATTLES		MEAST	Drescen
REP. FARA.	DESCRIPTION	Positioes	LIMITS	PRIMARY	REDUNDANT
5.10.11.34	Band 5,7- TM output	\$26-5, \$28-2	4	4.198	4.230
5.10.11.35	6+	s28-3		11.120	4.190
5.10.11.36	Band 6-	S28-4	·	4,749	4.259
5.10.11.37	SMA Htr +	\$28-5		4.47.2	4.608
5.10.11.38	Rtr -	S28-6		4.590	4,600
5.10.11.39	+7∇	S28-7 (S28-8 for RDT)		<u>5.65</u> 7	5.740
5.10.11.40	+29₹	\$28-9 (\$28-11 for RDT)	•	4,417	4.457
5.10.11.41	SMA -29V	\$26-5, \$28-10 (\$28-12 for RDT)	·	4.636	4627
5.10.11.42	Radiometer	\$26-6, \$28 <b>-</b> 2		5.293	5.389
5.10.11.43	CDAΩ	S28-3		5293	5.3//
5.10.11.44	Analog +	S28-4		4.805	4.885
5.10.11.45	Amalog -	S28-S		4145	7771
5.10.11.46	Electronech.	S28-6		5.077	5:037
5.10.11.47	Outgas - TM output	S26-6, S28-7		5.175	5:110
5.10.12.1	Bus voltage	S26-1, S27-1 (S27-3 for RDT)	ò	78.03	25.02
5.10.12.2	Input bus current	S26-1, S27-2 (S27-4 for RDT)	2	4 <u>3.06</u> m	1' C/2.553121'
5,10.12.3	SMA Atr + output vo	ltage S26-2, S27-5		71.70	21.88
5.10.12.4	Htr + ri	pple Seen on Scope	≪30 mV pk-pk	40	40
5.10.12.5	Htr - vo	ltage S26-2, S27-6	_	2223	-23.43
5.10.12.6	SHA Btr - T1	pple Seen on Scope	≪630 mV pk-pk	45	40
5.10.12.7	CDVU Vo.	ltage S26-3, S27-3		تحلظا	7.754
5.10.12.8	CDVU Ti	pple Seen on Scope	√240 mV pk-pk		40
5.10.12.9	Outgas - output vo	ltage \$26-3, \$27-7	· <u>-</u> ·	96.89	96.37
5.10.12.10	Outges - output ri	pple Seen on Scope	2.50V pk-pk	27Cin	96.37 1 350 mV
.10.12.11 	-Paresitic output vo	S26-3, S27-9 (S27-10 for RDT)		30.39	30.44
5.10.12.12	Parasitic output ri	pple Seen on Scope	< 900 mV pk-pk	30	<u> 130</u>



TS 16603 Rev B 18 December 1980

#### 10.4 Performance to

Outgas output telemetry

EF, PARA,

5.10.13.1

5.10.13.2

5.10.13.3

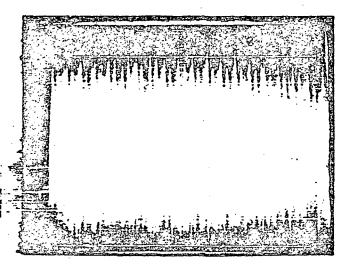
5.10.13.4

5.10.13.5

erformance test (continued		FB : 4782		
DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	MPASU PRIMARY	REMENT REDUNDANT
Input current telemetry	S26-4, S28-2 (S28-4 for RDT)		,469	१०५४
SMA Htr + output	\$26-5, \$28-5		3.464	4.60
SMA Htr -	S26-5, S28-6		4.631	WAE7
CDVU	<b>\$26-6, \$28-3</b>		4.25.2	4.35E

Photograph of reflected input current ripple in outgas mode - PRIMARY SIDE 5.10.14.1

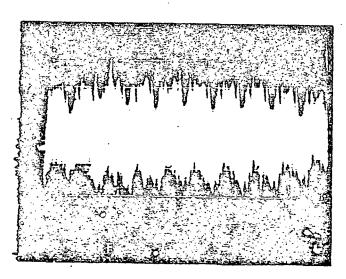
\$26-6, \$28-7



(2mA) CURRENT/DIV: 2 hill A.C.

(10us) SHEEP RATE: / Luxur

\_ in outgas mode - REDUNDANT SIDE 5:10.1-..



(2mA) CURRENT/DIV: 2 121 A A.C.

(10us) SWEEP RATE: 10 Mars

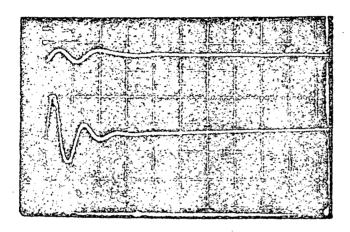


TS 16603 Rev B 18 December 1980

#### 10.4 Performance test (continued)

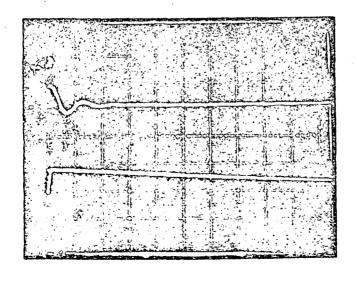
		DVM SWITCE		MEASUREMENT	
REF PARA	DESCRIPTION	POSITIONS	LIMITS	PRIMARY	REDUCIDANT
5.10.15.1.1	Input current with CDVU off.	\$26-1, \$27-2 (\$27-4 for RDT)	*.	40.80-	16 40.73m

5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is enabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: 7 //
(200mA) CURRENT/DIV: 200mA
(1ms) SHEEP RATE: 100 S

5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is disabled - PRIMARY SIDE



(200mA) CURRENT/DIV: 200mA (2ms) SWEEP RATE: 2115

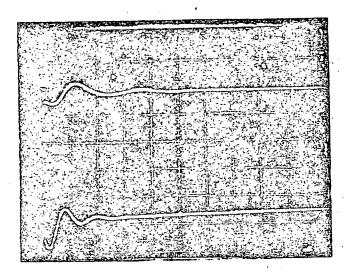
1EST S 30 TS 16603 Rev B 18 December 1980

#### 10.4 Performance test (continued)

EF. PARA.

DESCRIPTION

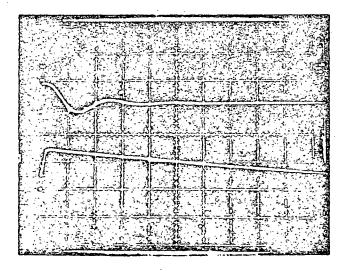
5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is enabled — REDUNDANT SIDE



(200mA) CURRENT/DIV: 200m/

(1mS) SWEEP RATE: / FF S

5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is disabled — REDUNDANT SIDE



tv) voltage/div: au

200mA) CURRENT/DIV: 200 mg

has) sweep rate: /ms

# ORIGINAL PAGE 19



LIMITS

TS 16603 Rev B 18 December 1980

10.4 Performance test (continued) OF POOR QUALITY

DVM SWITCH

PRIMARY\_\_RLDUNDANT

5.10.15.2.1 Input bus current with outgas disabled

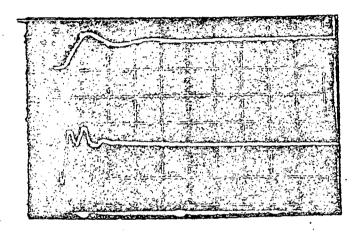
DESCRIPTION

REF. PARA.

S26-1, S27-2 (S27-4 for RDT)

POSITIONS

5.10.15.2.2 Photograph of input bus current and outgas voltage as outgas load is enabled - PRIMARY SIDE

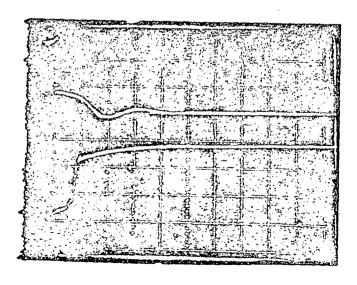


VOLTAGE/DIV: 50

(2A) CURRENT/DIV: 2.4

SWEEP RATE: 1MS (lmS)

5.10.15.2.2 Photograph of input bus current and outgas voltage as outgas load is disabled - PRIMARY SIDE



(5V) VOLTAGE/DIV: 50

(2A) CURRENT/DIV: 2/7

(2mS) SWEEP RATE: 1/1/5

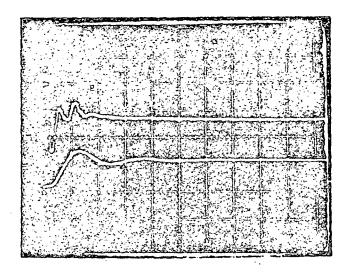
TS 16603 Rav B 18 December 1980

. 10.4 Performance test (continued)

F. PARA

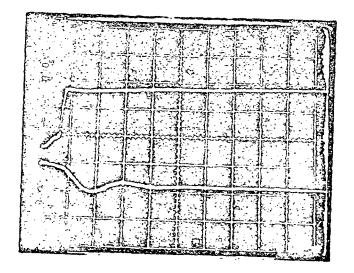
DESCRIPTION

5.10.15.2.2 Photograph of input bus current and outgas voltage as outgas load is enabled - REDUNDANT SIDE



- V) VOLTAGE/DIV: SU
- A) CURRENT/DIV: 2 A
- 00us) SWEEP RATE: Long

5.10.15.2.2 Photograph of input bus current and outgas voltage as outgas load is disabled - REDUNDANT SIDE



- VOLTAGE/DIV: 5 U (5V)
- CURRENT/DIV: 2A (2A)
- SWEEP RATE: 100 S (lmS)



### T9 16603 Rev B

#### 10.4 Performance test (continued)

x 100%

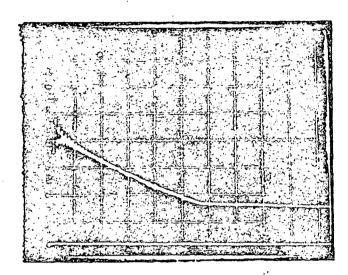
			FE: VE	
REF. PARA.	DESCRIPTION	POSITION	LIMITS	PRUMARY REDUNDANT
5,10.16.1	BPS voltage	S26-1, S27-1 (S27-3 for EDT)		28.00(-9) 29.00
5.10.16.2	BPS current	\$26-1, \$27-2 (\$27-4 for DDT)		17.6647(50) 18.14mV
5.10.16.3	SMA Htr +output voltage	S26-2, S27-5		21.76 (13) 22.01
5.10.16.4	SMA Htr +load current .	\$2 <del>6</del> -8, \$34-1		46.92 pg; 47.45,mi
5.10.16.5	SMA Htr -output voltage	\$26-2, \$27 <b>-</b> 6		-72.17 (14) 22.45
5.10.16.6	SMA Btr -load current	S26-8, S34-2		-8.75/199 8.868mi
5.10.16.7	TW output voltage	92 <del>6-</del> 3, \$27-3		7.614 (:0) 7.752
5.10.16.8	COVU load current	S26-8, S34-10		02716 V (45) 1276 V
5.10.16.9	Parasitic output voltage	\$26-3, \$27 <del>-9</del> (\$27	-10)	30.72 (21) 31.10
5.10.16.10	Parasitic load current	\$2 <del>6-</del> 8, \$34-7		14335 pay 144.96 100
5.10.16.11	Input power (5.10.16.1 x 5.10.16.2)	·•		49 <u>.459</u> 50.792
5.10.16.12	Output power ((5.10.16.3 x 5.10.16.4) + (5.10.16.5 x 5.10.16.6) + (5.10.15.7 x 5.10.16.8) + (5.10.16.9 x 5.10.16.10		nt)	17.33 17.22 28.82 2
5.10.16.13	Efficiency ((5.10.16.12) ÷ (5.10.16.11))			3 <u>5%</u> 35%



TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

5.10.17.1 Photograph of input bus current and input bus voltage as is disable - PRIMARY SIDE

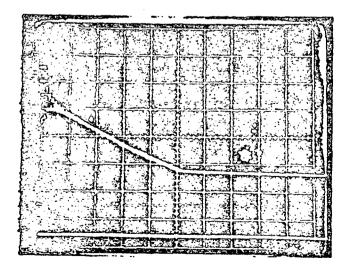


7) VOLTAGE/DIV: 51/

) CURRENT/DIV: AA

S) SWEEP RATE: Lons

5.10.17.1 Photograph of input bus current and input bus voltage as is disabled - REDUNDANT SIDE



(5V) VOLTAGE/DIV: 50'
(2A) CURRENT/DIV: 2A

(1ms) SWEEP RATE: 1:15



TS 16003 Rev B 18 December1980

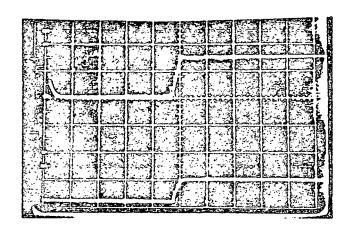
10.4 Performance test (continued)

Primary

Redundant

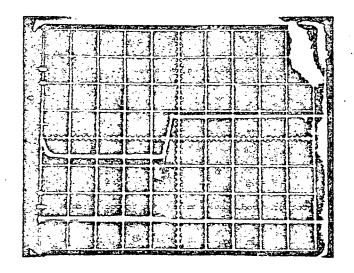
5.10.17.2 Unit stays off (check)

5.10.17.3 Photograph of input bus current and input bus voltage as is enabled - PRIMARY SIDE



(2A) CURRENT/DIV: 2P (100ms) SWEEP RATE: 100 MS

5.10.17.3 Photograph of input bus current and input bus voltage as as is enabled - REDUNDANT SIDE



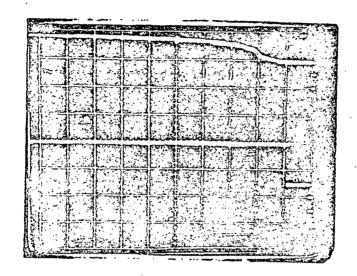
(2V) VOLTAGE/DIV: S//
(2A) CURRENT/DIV: 2 A
(100ms) SWEEP RATE: /com S



TS 16603 Rev B 18 December 1980

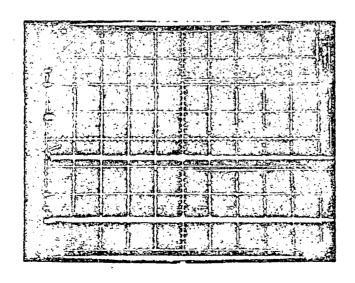
#### 10.4 Performance test (continued)

5.10.17.4 Photograph of input bus current and input bus voltage as is disabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: 2 V (2A) CURRENT/DIV: 2 19 (10ms) SWEEP RATE: 10 m S

5.10.17.4 Photograph of input bus current and input bus voltage as is disabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: 5U

(2A) CURRENT/DIV: 2A

(10ms) SWEEP RATE: 10 225

TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

FDB: 1787

MEASUREMENT

F. PARA. DESCRIPTION

DVM SWITCH POSITIONS

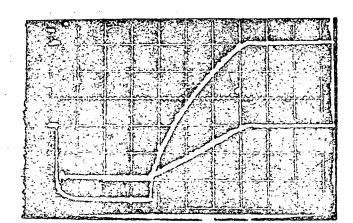
LIMITS

PRIMARY REDUNDANT

5.10.17.5 Record that UUT operates correctly.

(checkmark)

5.10.18.1 Photograph of input bus current and MUX output voltage as MUX enable command is issued (all loads are ON except outgas) - PRIMARY SIDE

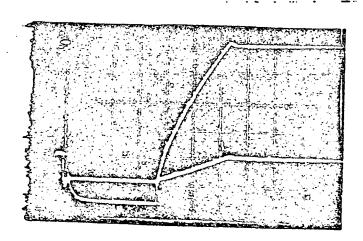


(5V) VOLTAGE/DIV: 5 U

(5A) CURRENT/DIV: 5 M

(20ms) SWEEP RATE: 20ms

5.10.18.2 Photograph of input bus current and parasitic output voltage as parasitic enable command is issued (all loads are ON except outgas) — PRIMARY SIDE



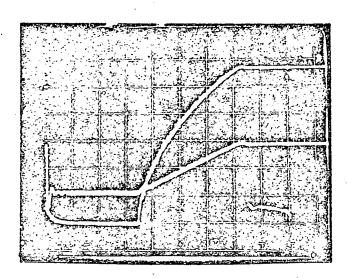
(5V) VOLTAGE/DIV: 57 (5A) CURRENT/DIV: 577 (20ms) SWEEP RATE: 10 M S

HAC TEST S 30 TS 16603 Rev B 18 December 1980

FB 2 4

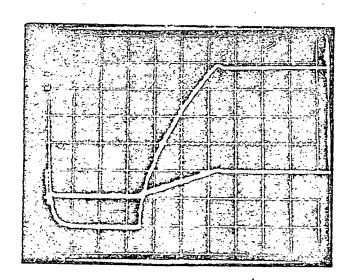
10.4 Performance test (continued)

.10.18.1 Photograph of input bus current and MUX output voltage as MUX enable command is issued (all loads are ON except outgas) — REDUNDANT SIDE



(5V) VOLTAGE/DIV: 5 V (5A) CURRENT/DIV: 5 A (20mS) SWEEP RATE: 10 MS

5.10.18.2 Photograph of input bus current and MUX output voltage as parasitic enable command is issued (all loads are ON except outgas) — REDUNDANT SIDE—



::

(5v) Volts/Div: 5U

(5A) Current/Div: 5A

(20mS) Sweep Rate: 10mS



TS 16603 Bev B

#### 10.4 Performance test (continued)

REP. PARA.	PESCRIPTION	TON SWITCE	LDITS	-PRIDART	REDUNDANT
5.10.18,4	Undervoltage Trip Point (OH/OFF)	826-1, 527-1 (\$27-3 for RDT)	18.0 ±1.50V	18.08	13.03
5.10.18.5	UUT stays OFF			<u> </u>	V
5.10.18.6	Undervoltage Trip Point (OFF/ON)	\$26-1, \$27-1 (\$27-3 for RDZ)	19.0 ±1.50V	19.87	18,88
5.10.18.7	Overvoltage Trip Point	\$26-1, \$27-1 (\$27-3 for EDT)	38.0 <u>+</u> 27	38,25	38,875cm
5.10.18.8	UUT stays OFF	•		<u></u>	<u>سمن</u>
5.10.18.9	UUT turns OH			L	£ .

2/4/82 DATE PLANTED PROVING



TS 16603 Pev B 18 December 1980

10.4 Performance test - Long Form

PROTOFLIGHT_	N// OR FLIGHT	:	5/N COL/	_TEXPERATURE	:131°F
IN-PROCESS	N/A QUAL N	1/1+	OR ACCEPTANCE_		
TESTING PEAS	E FINAL HOT - LIN	E FORM LI	NE VOLIACE:	320	VOLTS
REF. PARA.	DESCRIPTION	DVM SVITCE POSITIONS	LIMITS	MEASUR PRIMARY	EMENT REDUNDANT
5.10.1.1	Calibrate cmd gen		•	· <u>~</u> · · ·	1
5.10.2.1	Imput bus current	S26-1, S27-2 (S27-4 for redundant)		,218ax	, <u>2161</u> 41
5.10.2.2	MIX output voltage	S26-3, S27-1	30.0 <u>+</u> 0.90⊽	30,40	30,26
5.10.2.3	MUX load current	526-3, S27-12	3.55 ±0.400	3.30	3,29
The rest of	Section 5.10.2 require	s only checking	voltage - ind	icate by che	clomarks.
5.10.2.4.1	Bl + output voltage	\$26-1, \$27-5	• • •	<u> </u>	1/
5.10.2.4.2	31 -	\$27-6 -		<u>/</u> .	<u>.</u>
5.10.2.4.3	3i -	S27-5	_		1
5.10.2.4.4	31 +	S27-7	,		4
5.10.2.5.1	52 +	S27-7	•		W.
5.19.2.5.2	32 -	\$27 <del>-</del> 8			-K-
5.10.2.5.3	32 -	S27-8			V
5.10.2.5.4	B2 ÷	S27-7	•		<u>v</u>
5.10.2.6.1	B3 +	S27-9		. <u>.:/</u> .	_ <u></u>
5.10.2.6.2	33 -	S27-10			<u></u>
5.10.2.6.3	E3 -	S27-10		_/_	<u>i-</u>
5.10.2.6.4	E3 +	527-9		<u>- 4'</u>	<u></u>
5.10.2.7.1	T4 +	S27-11			<u></u>
5.10.2.7.2	B4 -	S27-12	•	<u></u>	<u></u>
5.10.2.7.3	B4 -	<b>S27-12</b>			<u> </u>
5.10.2.7.4	34 +	S26-1, S27-11			<u></u>
5.10.2.8.1	B5,7+	s26-2, S27-1	_	_/_	<u>~</u>
5.10.2.8.2	35,7-	S27-2			<u> </u>
5.10.2.8.3	B5,?-	S27-2		_/	<u>''</u>
5.10.2.8.4	35,7÷	S27-1			<u> </u>
5.10.2.9.1	36 +	\$27-3		1	<u>'/</u>
5.10.2.9.2	36 - output voltage	\$26-2, \$27-4	MELICHED	3. <del>V</del>	
			्रा <del>जी</del> <sup>थ</sup> ≅ः	•	[ ] (7 / )



TS 15603 Rev B 19 December 1990 \$(AV-1 1/22/8/

#### 10.4 Performance test (continued)

REF. PARA.	DESCRIPTION	DVM SWITCH FOSTILONS	LIMITS _		REMENT REDUNDANT
5.10.2.9.3	B6 - outpur voltage	S26-2, S27-4		1/	1/
5.10.2.9.4	36 + output voltage	S26-2, S27-3		- V	<u> </u>
5.10.2.10.1				V	V
5.10.2.10.2	·	S27-6		V -	1/
5.10.2.10.3	) ' )	S27-6	•		V
5.10.2.10.4	1	V 527-5			
5.10.2.11.1	-77	S26-2, S27-7			V
5.10.2,11.2	-77	(S27-8 for RDT)			V
5.10.2.12.1		526-2, S27-9		- · <del></del>	
		(S27-11 for RDT)			in
5,10,2,12,2	-29⊽	526-2, 527-10			
.,,		(S27+12 for RDT)		1	
5,10.2.12.3	-29∇	S25-2, S27-10			
5.10.2.12.4	_₩	\$26+2, \$27+9		1	
5.10.2.13.1	<b>*</b>	S25-3, S27-2		<i>V</i>	V
5.10.2.13.2	<b>\$</b>	S27-2			
5.10.2.14.1	,	527-3			
5.10.2.14.2		\$27-3		1/	V
5.10.2.15.1	· •	527-4		V	
5.10.2.15.2		S27-5			
5.10.2.15.3		\$27-5			<i>\\</i>
		527-4			1/
5.10.2.15.4		S27-6			11
5.10.2.16.1	<u> </u>	527-6		<del></del>	
	Electromech. 🔻 Outgas output voltage	<b>y</b>			V
5.10.2.17.1		S26-1, S27-1			elining and
5.10.3.1	Bus voltage	(527-3 for RDT)		35.06 (49	135.00
	MTT lasi summan	S26-3, S27-12	∆ 130 ≟0 0	125A 41.43 AV	41.36m
5.10.3.2	MUX load current	525-1, 527-2	4.230 _0		
5.10.3.3	Bus current	(S27-4 for RDI)		107,500	0)109.57m
	336 00:000	(\$27-4 15F RD1) \$26-1, \$27-1			•
5.10.3.3.2	BPS Volcage	\$20-1, \$27-1 \$27-3)			35.00
5.10.3.3.3	BPS Current	S25-1, S27-2		107.19mi	10.8.13mV
	•	(\$27-4)	•		
5.10.3.3.4	MUX Current	S25-3, S27-12		41.37ms	41.31 MU
	•			•	192

-57



TS 16603 Rev B 18 December 1980

#### 10.4 Performance test (continued)

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		•		•	•	•
REF. PARA.	DESCRIPT	CION	DVM SWITCH POSITIONS	LIMITS	MEASU PRIMARY	REMENT REDUNDANT
5.10.3.4.1	Bl + output	: voltage	S26-1, S27-5	20.50 ±2.50V	20.621	1 20.81
5.10.3.4.2	B1 + output		Lock on Scope	<600 mV pk-pk	20	20
5.10.3.4.3	B1 - output		\$26-1, \$27-6	-20.50 ±2.50V	24.7	20.93
5.10.3.4.4	Bl - output		Look on Scope	<600 mV pk-pk	20	20
5.10.3.5.1	B2 + output		S26-1, S27-7	20.50 ±2.50V	70.45	20.67
5.10.3.5.2	B2 + output		Look on Scope	≪600 mV pk-pk	20	20
5.10.3.5.3	B2 - output	: voltage	S26-1, S27-8	-20.50 ±2.50V -	- 20,48,	20.69
5.10.3.5.4	B2 - output	ripple	Seen on Scope	<600 mV pk-pk	20	20
5.10.3.6.1	B3 + output	: voltage	S26-1, S27-9	20.50 +2.50V	20.53	20.60
5.10.3.6.2	B3 + output	ripple	Seen on Scope	<500_mV pk-pk	. <u>20</u>	20
5.10.3.6.3	B3 - output	: voltage	S26-1, S27-10	-20.50 ±2.50V -	- 2048 (	20.69
5.10.3.6.4	B3 - output	ripple	Seen on Scope	≪600 mV pk-pk	20	20
5.10.3.7.1	B4 + output	voltage	S26-1, S27-11	20.50 ±2.50V	27.59	720.81
5.10.3.7.2	B4 + output	ripple	Seen on Scope	<600 mV pk-pk	25	20
.10.3.7.3	34 - output	voltage	\$26-1, \$27-12	-20.50 ±2.50v -	-20.62	20.82
5.10.3.7.4	B4 - output	ripple	Seen on Scope	<500 mV pk-pk	20 "	20
5.10.3.8.1	B5,7 ÷	voltage	S26-2, S27-1	20.50 ±2.50V	20:20	20.20
5.10.3.8.2	35,7 +	ripple	Seen or Scope	≪600 mV pk-pk	40	40
5.10.3.8.3	RS,7 -	voltage	S26-3, S27-2	-20.50 +2.50V	-20.19 (1	70.23
5.10.3.8.4	B5,7 -	ripple	Seen on Scope	≪600 mV pk-pk	40	40
5.10.3.9.1	B6 +	voltage	S26-2, S27-3	20.50 ±2.50V	20,40 (1	120.57
5.10.3.9.2	86 +	ripple	Seen on Scope	≪600 mV pl -pk	ac.	20
5.10.3.9.3	B6 -	voltage	\$26-2, \$27-4	-20.50 ±2.50V -	- 20.41 [i	20.59
5.10.3.9.4	36 -	ripple	Seen on Scope	<500 mV pk-pk	20	20
5.10.3.10.1	SMA Htm +	voltage	S26-2, S27-5	21.20 ±2.12V	22.23(1	353तत
5.10.3.10.2	SMA Htr +	ripple	Seen on Scope	≪630 mV pk-pk	20	20
5.10.3.10.3	SMA Rtr -	voltage	S26-2, S27-6	-21.20 ±2.12 V	- 22.72 [	472.96
5.10.3.10.4	SMA Htr -	ripple	Seen on Scope	<630 mV pk-pk	<u>20</u>	20.
5.10.3.11.1	_SMA +7V 🕏	voltas :	S26-2, S27-7 (S27-8 for RDT)	7.10 ±0.80V	7.71 1:	5) 7.8/
5.5.10.3.11.2	SMA +7V out	put ripple	Seem on Scope	≪10 mV pk-pk	3c	40



Ts 16603 Rev B 18 December 1980

#### 10.4 Parformance test (continued)

•			•		•
٠	BEF PARA	Description	POSTFICES	LIMITS	Primari dedundahi
	5.10.3.12.1	SHL +29V output voltage	\$26-2, \$27-9 (\$27-11 for RDT)	29.50 <u>+</u> 1.50v	30.41(16) 30.68
	5.10.3.12.2	SMA +29V ripple	Seen on Scope	<b>4370</b>	40 50
	5.10.3.12.3	SMA -29V voltage	S26-2, S27-10 (S27-12 for UDT)	-29.50 <u>+1:36</u> v _	32.39(19) 30.70
	5.10.3.12.4	SMA -29V ripple	Sees on Scope	<b>≪870 <del>1</del>88 19</b> k 19k	50 50
	5.10.3.13.1	MUX voltage	\$2 <b>6-3, \$27-1</b>	.30.00 <u>+</u> 0.907	31.06 (18) 30.25
	5.10.3.13.2	MUX ripple	Sees on Scope	<000 mV, pk-pk	6C 70
	5.10.3.14.1	Radiometer voltage	S26-3, S27-2	6.50 ⊴0.857	S.621(10) 5.634
	5.10.3.14.2	Radiomater ripple	Seem on Scope	<250 m√ pk-pk	20 40
	5.10.3.15.1	CDVU voltage	\$26-3, \$27-3	8.00 40.807	7.633907.766
	5.10.3.15.2	CDVU ripple	Sees on Scope	€260 EN pk-pk	20 20
	5.10.3.16.1	Analog + voltage	\$26-3, \$27-4	21.20 ±2.129	22.350) 27.50
	5.10.3.16.2	Analog + ripple	Seen on Scope	≪30 æ7⊊k-pk	30. HO
	5.10.3.16.3	Analog - voltage	S26-3, S27-5	-21.20 <u>+</u> 2.127 -	- 22.4743)27.56
	0.3.16.4	Analog - ripple	Sees on Scope	≪30 mV pk-pk	20 20
	5.10.3.17.1	Electromech. voltage	526 <b>-</b> 3, <i>5</i> 27 <i>-</i> 6	33.40 <u>£</u> 3.347	33.07@9333.43
	5.10.3.17.2	Electromech. ripple	Sees on Scope	Q.OV pk-pk	30 60
	5.10.3.18.1	Ourgas V voltage	S26-3, \$27-7	100.0 ±12.07	16:95 105.24
	5.10.3.18.2	Outgas output ripple	Sees ca Scope	<0.07 pk-pk	225
	5.10.4.1	Imput current telemetry	\$26-4, \$28-2 (\$28-4 for NDT)		2.975 3.073
	5.10.4.2.1	Band 1 + volt. telemtry	S26-4, 528-5	•	3,766 3,811
	5.10.4.2.2	Bend 1 -	S28-6	-	3.755 3.790
	5.10.4.3.1	Bond 2+	S28-7		3,722 3,772
	5.10.4.3.2	Band 2-	S28-8	3	3,710 3,748
	5.10.4.4.1	Band 3+	<b>528-9</b>	3	3.759
	5.10.4,4.2	Band 3-	S28-10	3	5. <u>732</u> 3 <u>771</u>
	5.10.4,5.1	Band 6+	528-11	3	1.740 3.785
	5.10.4.5.2	Bend 4-	S26-4, 528-12	3	5.749 3.787
	5.10.4.6.1	Band 5,7+	\$26-5, <b>\$28-</b> 1	3	3.688 3.713
	5,10.4.6.2	Band 5,7- volt. telemetr	y \$26-5, \$28-2	. 3	.677 3.681



TS 16603 Rev B 18 December 1980

#### 10.4 Performance test (continued)

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REF, PARA,	DESCRIPTION	DVM SWITCH POSITIONS LIMI	MEASUREMENT TS PRIMARY REDUNDANT
5.10.4.7.1	Band 6 + volt. telemtry	\$26-5, \$28 <b>-3</b>	" 3.690 3.725
5.10.4.7.2	Band 6 -	S28-4	3,725 3,760
5.10.4.8.1	SMA Htr +	S28-5	4.059 4.105
5.10.4.8.2	SMA Htr -	∫ S28-6	4113 4161
5.10.4.9	SMA +7V	S26-5, S27-7 (S27-8 for RDT)	4.928 5.021
5.10.4.10.1	SMA +29V	S26-5, S28-9 (S27-11 for RDT)	4.166 4.330
5.10.4.10.2	SNA -29V	\$26-5, \$28-10 (\$27-12 for RDT)	5.517 3.623
5.10.4.11	MUX	S26-6, S28-1	4.232 4.293
5.10.4.12	Radiometer	S26-6, S28-2	4.731 4.739
5.10.4.13	CDV0 .	\$26-6, \$28-3	4.292 4362
5.10.4.14.1	Analog + volt. telemtry	S26-6, S28-4	3 945 4523
5.10.4.14.2	Analog -	\$26-6, \$28-5	3.930 3.949
.10.4.15	Electromech.	S28-6	- 4.060 4105
5.10.4.16	Outgas voit. telemetry	S26-6, S28-7	5.348 5.261
5.10.5.1.1	Analog + load current	\$26-3, \$27-11 mV ÷ 10 ∞ .	Acque / 5.55m / 19/5.700mi
5.10.5.1.2	אמא	S26-3, S27-12 mV ÷ 10 = .	Amps 41.43 ML (25) 41.35 mV
5.10.5.1.3	Band 1 +	\$26-7, \$34-1 mV ÷ 0.5 =	TA 9/165 - 100 977.50 -V
5.10.5.1.4	Band 1 -	S34-2	91.5500 (27) 52.74 006
5.10.5.1.5	2 +	S34-3	40.69 m (18) 91.69
5.10.5.1.6	2 -	S34-4	91.55~ (27) 62.50
5.10.5.1.7	3 + .	S34-5	7/144 0 (30) 21.76
5.10.5.1.8	3 -	S34-6	41.22-61) 27.19
5.10.5.1.9	4 +	S34-7	4155-(12) 27.55
5.10.5.1.10	4 -	\$34-8	71-27=-(11) 921]
5.10.5.1.11	5,7 +	· \$34-9	90.52m 1(10) 90 BS
5.10.5.1.12	5,7 -	S34-10	75 - 475) 9c. (8
5.10.5.1.13	6 +	♥ S34-11	17. med (10 47.81
5.10.5.1.14	Band 6 -	s26-7, s34-12	4726044770
10.5.1.15	SNA Htt +	$$26-8$ , $$34-1$ mv $\div 0.5 =$	
5.10.5.1.16	SMA Htr - load current	S26-8, $S34-2$ mV = mA	9:973mbg, 9:069



TS 16603 Ray B

ECN-2 7-6-81 SCN-3 1/3/8 **(3)** 

#### 10.4 Performance test (continued)

REF. PARA,	DESCRIPTION	DVM SVITCE POSITIONS	rihits	MEASUREMENT PRIMARY REDUNDANT
5.10.5.1.17	SMA +29V load current	\$26-8, \$34-3 B	V ÷ 0.402 = mA	50.75- (6) 5125
5.10.5.1.18	SHA -29V	S34~4 E	V ÷ 0.402 ≈ mA	50.53.00 51.05
5.10.5.1.19	SMA +7V	S34-5	V ÷ 0.1 = Amps	1273 / (42) ,781
5.10.5.1.20	Analog -	\$34-6 m	V ÷ 0.402 = mA	1268 V (43) .270
5.10.5.1.21	Radiometer	534-9 ™	V ÷ 0.5 = m4	12412 (4) 154138
5.10.5.1.22	CDVU .	<b>6</b> 534-10 ™	V + 0.5 = mA	1272 V (45) 1277
5.10.5.1.23	Electromech, load current	\$26-8, \$34-11 m	7 ÷ 0.402 = mA	,210 V (46) 1212
5.10.5.2.1	Bus power supply voltage	\$26-1, \$27-1 (\$27-3 for RDT)		35.65 \$735.60
5.10.5.2.2	Bus input current	S26-1, S27-2 E (S27-4 for RDT)	V + 10 = Amps	107.67 (28) 105.67
5.10.5.2.3	PIN (Section 5.10.5)			376.845 380.345
5.10.5.2.4	PIN (Section 5.10.3)	,		376.39 379.99 50
5.10.5.2.5	P <sub>IN</sub> (avg)			376.618 380.17
5.10.5.2.9	Input current at current	limit	26-1, 27-2 (26-1 27-4 Rde	125.12mu 132.34
	Input voltage at current	limit :	27-1 (27-3 Rdt	34.511 34.75
	MUX voltage at current li	mie	26-3, 27-1	30.13 30.18
	MUX current at current li	mit	27-12	51.67.00 85.93
5.10.5.3.1	POUT			271.01 274.16
5.10.5.3.2	Efficiency		> 70%	72.45% PR.H %



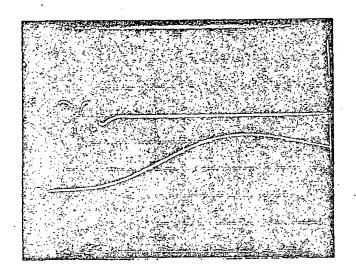
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

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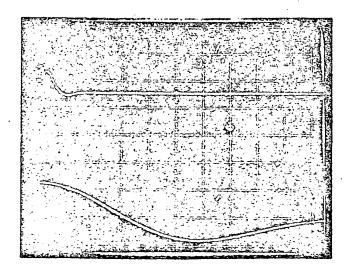
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/ • • EF. PARA	DESCRIPTION	DVM SWITCH PCSITIONS	LIMITS		UREMENT REDUNDANT
5.10.6.1	+7V output pulsed	S26-2, S27-7 (S27-8 for RDT)	7.10 <u>4</u> 0.80V	7.02	7.16
5.10.6.2	Photograph of transients	induced on input by			••



(0.2A) CURRENT/DIV: 2 A A.C.
(1V) VOLTAGE/DIV: 2 U
(200uS) SWEEP RATE: 2 CC LINE

5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as pulse-load on SMA +7V outputs is being removed - PRIMARY SIDE



0.2A) CURRENT/DIV: <u>74 A.C.</u>

1V) VOLTAGE/DIV: <u>2 U'</u>

200uS) SWEEP RATE: <u>2-6 Usin</u>



TS 16603 Rev B 18 December 1980

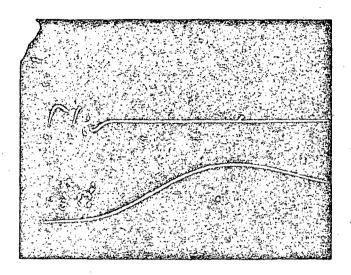
FB : 479

10.4 Performance test (continued)

KEF. PARA

DESCRIPTION

5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V output is being pulse-loaded-REDUNDANT SIDE

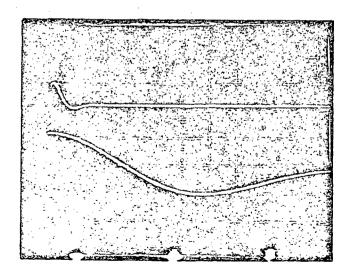


(0.2A) CURRENT/DIV: , 2 A.C.

(1V). VOLTAGE/DIV: 2 U

(200us) SWEEP RATE: 200mg

5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as pulse-load is being removed-REDUNDANT SIDE



(0.2A) CURRENT/DIV: ,2 A.C.

(1V) VOLTAGE/DIV: 20'

(200us) SWEEP RATE: 200 Mg

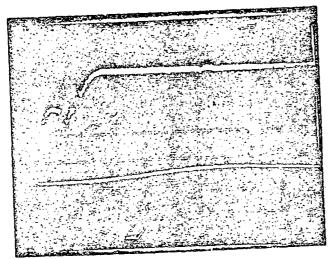


TS 16603 Rev B

# 10.4 Performance cost (continued)

10.4	Performance toot (continued)	DVM SWITTE POSITIONS	LIMITS	PROMARY EXDUNDAN
REF. PARA	DESCRIPTION	•		112.23:00 113.41
	Input bus current	\$26-1, \$27-2		والمنظام المنظلاء
5.10.6.3	Tubar pas carren	(\$27-4 for RDT)		4.608 4.74
	SMA +7V TM- pulsed	\$26-5, \$28-7		
5.10.6.4	SER TV M. F	(S28-8 for RDT)	•	.4575V .46511
	SMA +7V load current-	(S26-8, S34-5		
5.10.6.5		induced on input bu	s current and	SMA +7V load

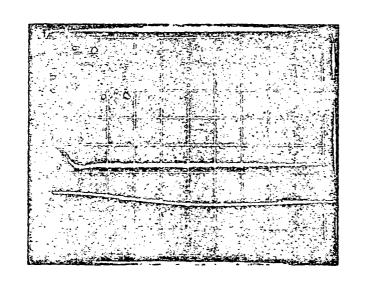
Photograph of transients induced on input bus current and SMA +7V load current as SMA +7V output is being pulse-loaded-PRIMARY SIDE



(LA) \* SMA CURRENT/DIV: 100 MIL (MA) BUS CURRENT/DIV: 14 SHEEP RATE: 200 Marie (200uS)

. Using 0.1 a\_shunt and 100 mV/Div on acops

rnotograph of translents induced on input bus current and SMA +7V load current as pulse-load is being removed-PRIMARY SIDE



(1A) + SHA CURRENT/DIV: /CO /1. (NA) BOS CURRENT/DIV: / / SWEEP RATE: 262 ----(250us)

\*Uning 0.1 \_ shunt and MOOMV/Div on Scope



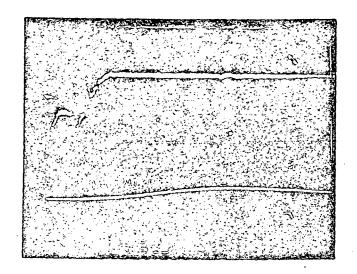
TS 16603 Rev B \$4 December 188 ECS-2 F-6-8

## 10.4 Performance test (continued)

REP. PARA

DESCRIPTION

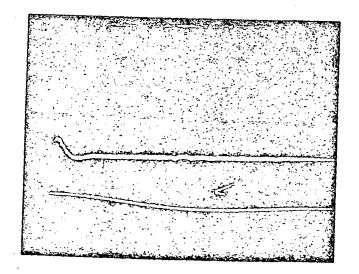
5.10.6.6 Photograph of transients induced on input bus current and SMA + 7V load current as SMA + 7V output is being pulse loaded - REDUNDANT SIDE



(1A) SMA CURRENT/DIV: 100 M U'
(2A) BUS CURRENT/DIV: 1 1-1
(200us) SWEEP RATE: 200 Magazi

\*Using O.l --hunt and 100 mV/Div on scope.

5.10.6.6 Photograph of transients induced on input bus current and SMA + 7V load current as pulse-load is removed - REDUNDANT SIDE



(1A) \* SMA CURRENT/DIV: 1CC MU

(2A) BUS CURRENT/DIV: 1A

(200cs) SWEEP RATE: 2CO Local

\*Using 0.1 \_\_\_ahunt and 100mV/Div on acope.

2



TS 16603 Rev B 18 December 1980

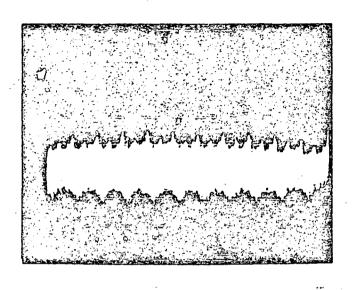
10.4 Performance test (continued)

EF, PARA

DESCRIPTION

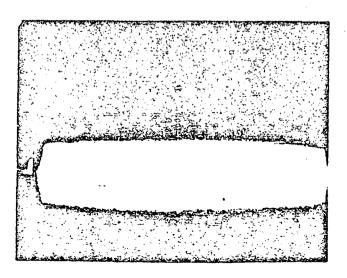
.10.7.1

Photograph of reflected input current ripple - FRIMARY SIDE



CURRENT/DIV: 211 HA.C. (10us) SWEEP RATE: /Curl

5.10.7.1 Photograph of reflected input current ripple - REDUNDANT SIDE



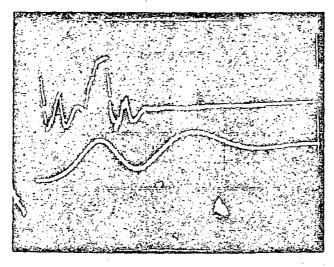
(1mA) CURRENT/DIV: 2m/A\_C.

(10us) SWEEP RATE: 1/ 10

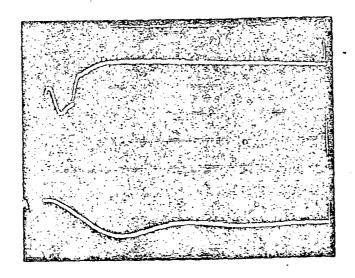
- [8.1.1 Input current full load S25-1, S27-2 (S27-4 for RDT).
- (TEST) 167.87mx 1081760 830 8569av 87.64

C

- 10.8.1.2 Input current w/o analog Same
- 5.10.8.1.3 Photograph of transients induced on input bus current and analog + voltage as analog output is enabled PRIMARY SIDE



- (2V) VOLTAGE/DIV: 2U
- (1A) CURRENT/DIV: 1A (500us) SWEEP RATE: 500 Acres
- 5.10.8.1.3 Procograph or transients induced on imput ous current and analog + voltage as analog output is disabled PRIMARY SIDE



- (5V) VOLTAGE/DIV: 2 V.
- (1A) CURRENT/DIV: ///
- (1ms) SWEEP RATE: SOOLS

ORIGINAL PAGE IS OF POOR QUALITY



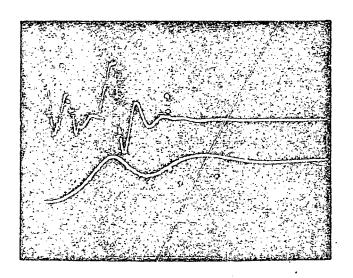
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

#### REF. PARA.

#### DESCRIPTION

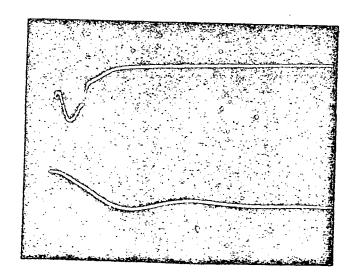
Photograph of transients induced on input bus current and analog + output voltage as analog output is enabled - HEDUNDANT SIDE. 5.10.8.1.3



(27) VOLTAGE/DIV: 21 CURRENT/DIV: 1/9 (LA)

(500us) SWEET RATE: 500

Photograph of transients induced on input bus current and analog + output 5.10.8.1.3 voltage as analog output is disabled - REDUNDANT SIDE.



(5∀) VOLTAGE/DIV: QU

(1A)CURRENT/DIV: 14

(SEET) SWEEP RATE: SUCK-



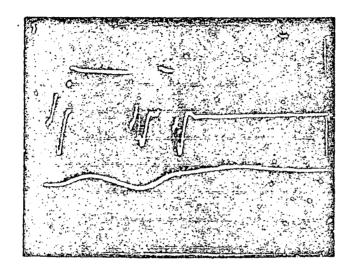
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

•		EDTIWE MVD	मृष्ट ४ व		JREMENT.
F. PARA.	DESCRIPTION	POSITIONS	LIMITS	PRIMARY	REDUNDANT
_				200	10:10

5.10.8.2.1 Input bus current w/o SMA S26-1, S27-2 +7V load (S27-4 for RDT)

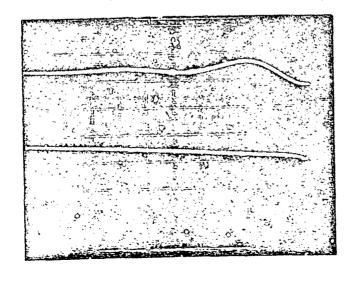
5.10.8.2.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V is enabled - PRIMARY SIDE.



(5V) VOLTAGE/DIV:  $\frac{2U}{A}$ 

(200us) SWEEP PATE: Societ

5.10.8.2.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V is disabled - PRIMARY SIDE.



(2V) VOLTAGE/DIV: 2 V

(la) current/div: 1/7

(2ms) SWEEP RATE: 500 mars



TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

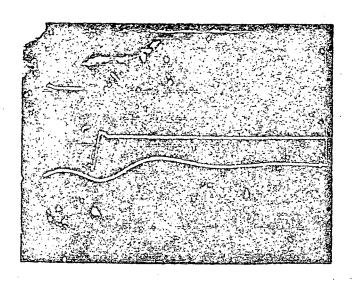
FEF PARA

Ţ,

C

DECCRIPTION

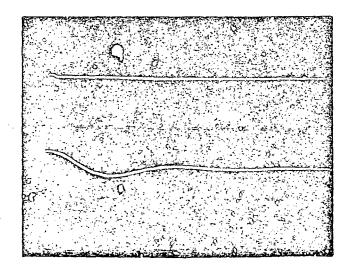
j.10.8.2.2 Photograph of transients induced on input bus current and SMA +7 output voltage as SMA +7V is enabled - REDUNDANT SIDE



(5V) VOLTAGE/DIV: 2V (1A) CURRENT/DIV: 1A

(200us) SWEEP RATE: 5001-

2.10.8.2.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V is disabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: 2 L'

(IA) CURRENT/DIV: 1 H

(Zms) SWEEP RATE: Sock-en

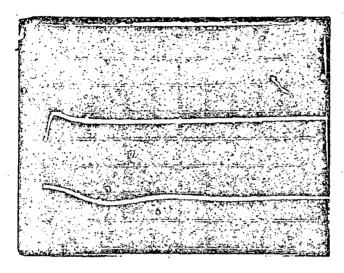


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15 10003 Rev B 18 December 1980

#### 10.4 Performance test (continued)

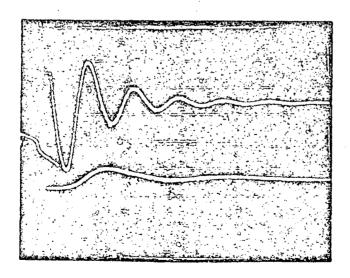
EF. PARA.	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	MEASUREMENT PRIMARY REDUNDANT
5.10.8.2.3	Input bus current w/o SMA +29V load	S26-1, S27-2 (S27-4 for RDT)		104.44 96.04
5.10.8.2.4	Photograph of transients voltage as SMA +29V is en			d SMA +29V output



(2V) VOLTAGE/DIV: //
(0.5V) CURRENT/DIV: 5/M

(Ims) SWEEP RATE: SOC ware

5.10.8.2.4 Photograph of transients induced on input ous current and SMA +29V output voltage as SMA +29V is disabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: 1V

(0.5A) CURKENT/DIV: 5A

(1ms) SWEEP RATE: 500 m 3



TS 16603 Rev B 18 December 1980

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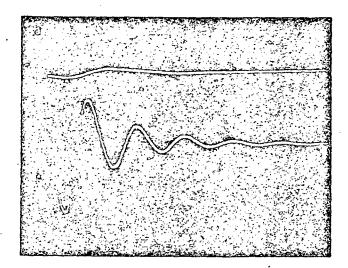
10.4 Performance test (continued)

/ EF. PARA

C

DESCRIPTION

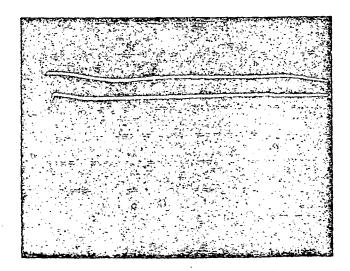
5.10.8.2.4 Photograph of transients induced on input bus current and SHA +29V output voltage as SMA +29V is enabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: //
(0.5A) CURRENT/DIV: .5 A

(1ms) SWEEP RATE: SUOLATE

5.10.8.2.4 Photograph of transients induced on input bus current and SMA +29V output voltage as +29V is disabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: 11/

(0.5) CURRENT/DIV: 5.A

(1ms) SWEEP RATE: SCOA-SE



TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

FE : 47

MEASUREMENT
PRIMARY REDUNDANT

F. PARA. DESCRIPTION

5.10.8.3.1 Input bus current
w/o CDVU load

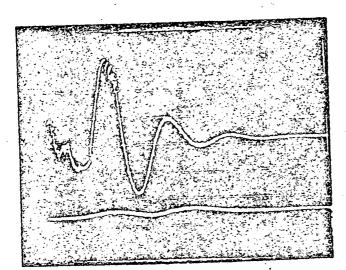
\$26-1, \$27-2 (\$27-4 for RDT)

DVM SWITCH

POSITIONS

105,92 97,52

5.10.8.3.2

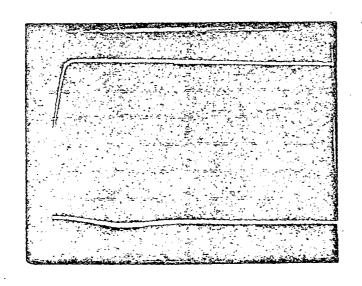


arrent and CDVU output

VOLTAGE/DIV: 1.5A) CURRENT/DIV: 5/

ES) SWEEP RATE: 500m5

2 .0.8.3.2 Photograph of transients induced on input bus current and CDVU output voltage as CDVU is disabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: 1 / (0.5V) CURRENT/DIV: 15/+

(1ms) SWEEP RATE: 500ms



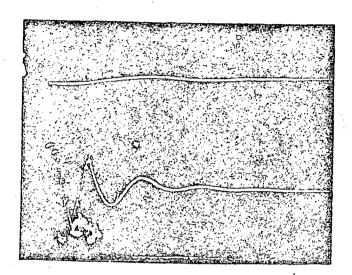
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

	PARA.
-E -	PARA.

DESCRIPTION

5.10.8.3.2 Photograph of transients induced on input bus current and CDVU output voltage as CDVU is enabled - REDUNDANT SIDE

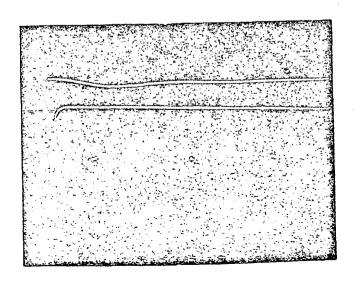


(2V) VOLTAGE/DIV: //

(0.5A) CURRENT/DIV: . S

(Ims) SWEEP RATE: SCHLERE

5.10.8.3.2 Photograph as transients induced on input bus current and CDVU output voltage as CDVU is disabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: / V

(0.5A) CURRENT/DIV: . . .

(1ms) SWEEP RATE: 500 Land



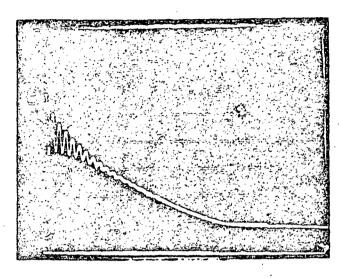
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

FF. PARA.

DESCRIPTION

5.10.9.1 Photograph of turn-off transient of input bus voltage and input bus current as bus voltage is removed - PRIMARY SIDE

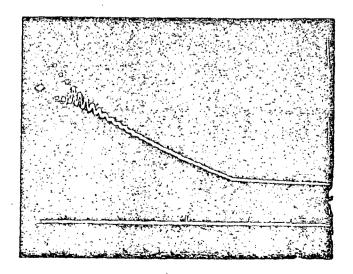


(5V) VOLTAGE/DIV: 50

(5A) CURRENT/DIV: 517

(500us) SWEEP RATE: 50

Photograph of turn-off transient of input bus voltage and input bus current as bus voltage is removed - REDUNDANT SIDE



(5V) VOLTAGE/DIV: SV

(5A) CURRENT/DIV: 5/A

(500ms) SWEEP RATE: SCOLOU



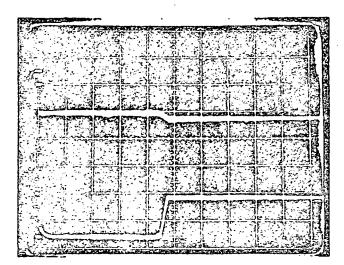
TS 16603 Rev B 18 December 1980

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10.4 Performance test (continued)

7	. •	DVM SWITCH		MEASU	REMENT
REF. PARA,	DESCRIPTION	POSITIONS	LIMITS	PRIMARY	REDUNDANT
KET THIN	33.0				1/
5.10.9.2	UUT stays off when bus	S1-ON (S2-ON	••	<u> </u>	
J. 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	is reapplied.	for RDT)	•		_

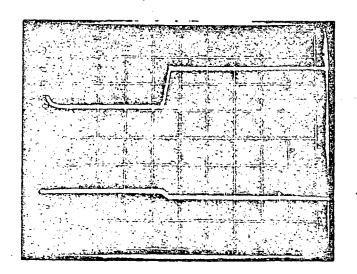
5.10.9.3 Photograph of turn-on transient of bus voltage and current as ON command is issued - PRIMARY SIDE



(54) VOLTAGE/DIV: SI (5A) CURRENT/DIV: 5A

(100ms) SWEEP RATE: ICAMS

5.10.9.3 Photograph of turn-on transient or ous voicege and current as ON command is issued - REDUNDANT SIDE



\$ ...

(5W) VOLTAGE/DIV: SV

(5A) CURRENT/DIV: S/T

(100ms) SWEEP RATE: 100ms



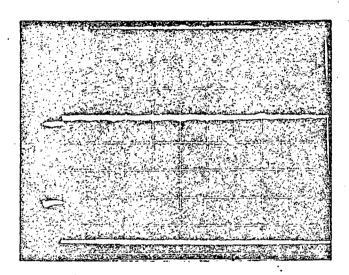
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

FF. PARA.

DESCRIPTION

5.10.9.4 Photograph of turn-off transient of input bus voltage and current as OFF command is issued - PRIMARY SIDE

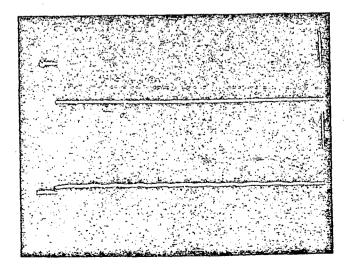


(5V) VOLTAGE/DIV: S/A

(5A) CURRENT/DIV: 5 H

(10ms) SWEEP RATE: 16 .~ S

5.10.9.4 Photograph of turn-off transient of input bus voltage and current as OFF command is issued - REDUNDANT SIDE



(5V) VOLTAGE/DIV: 5 c'

(5A) CURRENT/DIV: 5 A

(10ms) SWEEP RATE: 10 m S



TS 16603 Rev B 18 December 1980

#### 10.4 Performance test (continued)

*(*7.

REF. PARA.	DESCRIPTION .	DVM SWITCE POSITIONS	LIMITS	PRIMARY	REDUNDANT
5.10.9.5	Record	\$27-2 (\$27-4)	•	107.22	·v97.31
5.10.9.6	Record	(S27-4 (S27-2)		Zuzms	21.51mi
•	Record	\$27-2 (\$27-4)			•
			••	106.36 m v	76.19
5.10.9.7	Record that UUT turns on.	(Checkmark)	• •	1	4
5.10.10.1	Input bus current AFTER it reads ~ 17A AND input bus voltage reads ~ 21V.	S26-1, S27-2 (S27-4 for RDT)		125.24m,	133.29
5.10.10.2	Input bus voltage with 17.0A load	\$26-1, \$27-1 (\$27-3 for RDT)	•	35.00	35.00
5.10.10.3	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)	•	3,66	3.875
5.10.10.4	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)	. • ••	3.201	3.513
•	Input bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)	· · · · · · · · · · · · · · · · · · ·	3503	35:00
• .	Input bus current	S26-1, S27-2 (S27-4 for RDT)		12 <u>7,000</u> mv	123.39
5.10.10.5	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)		3.06	3.05
	Input bus voltage	S26-1, S27-1 (S27-3 for RDT)	• •	<u>34.99</u>	35.00
	Input bus current	S26-1, S27-2 (S27-4 for RDT)		110010	108.17
5.10.10.6	Imput current telemetry output	S26-4, S28-2 (S28-4 for RDT)		2.51	3.51
	Input bus voltage	S26-1, S27-1 (S27-3 for RDT)		<u>35.00</u>	35.00
	Input bus current	S26-1, S27-2 (S27-4 for RDT)		9 <u>4.75</u> mu 2 <u>.01</u>	94.24
5.10.10.7	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)		2.01	
_	Input bus voltage	S26-1, S27-1 (S27-3 for RDT)		34.95	35.00
. <b>?</b>	Input bus current	S26-1, S27-2 (S27-4 for RDT)		85.31mi	79.77



TS 16603 Rev B 18 December 1980

#### 10.4 Performence test (continued)

			(G) : 4.252		
		DVH SWITCH		MEAST	erent
REF. PARI.	DESCRIPTION .	POSITIONS	TIMITS .	PRIHARY	RECONDAIN
5.10.10.8	Imput current telemetry output	\$26-4, \$25-2 (\$28-4 for RDT)		1.5C	1.50
	Imput bus voltage	\$26-1, \$27-1 (\$27-3 for EDT)		35.01	35.00
	Input bus current	S26-1, S27-2 (S27-4 for RDT)		61.61.00	<u>61.5</u> 5
5.10.10.9	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)		Liog	405
	Imput bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)		35.62	<u>35.</u> ₩
	Imput bus current	S26-1, S27-2 (S27-4 for RDT)		5368 RIV	•
5.10.10.10	Imput current telemetry output	\$26-4, \$28-2 (\$28-4 for RDT)			.427
	Imput bus voltage	S26-1, S27-1 (S27-3 for RDT)		35.00	
	Imput bus current	\$25-1, \$27-2 (\$27-4 for EDT)		34.171010	25.01
5.10.10.11	Imput current telemetry output	\$26-4, \$28-2 (\$28-4 for RDT)	·	1262 V	1318
	Impur bus voltage	S26-1, S27-1 (S27-3 for RDT)		35.00	35:00
	Imput bus current	\$26-1, \$27-2 (\$27-4 for RDT)		30.03 mi	23.6/
5.10.10.12	Imput current telemetry output	\$26-4, \$28-2 (\$28-4 for RDI)		-,2641.	
	Imput bus voltage	S25-1, S27-1 (S27-3 for RDT)		3 <u>5.00</u>	
	Taput bus current	\$26-1, \$27-2 (\$27→ for RDT)		10 16 3 m.	
5.10.11.1	Band le output voltage	S26-1, S27-5		23.70 v'	24.37
5.10.11.2	Band 1- output voltage	S27-6	-	73.89	-23.79
5.10.11.3	1 2+ 1	<b>527-7</b>		24.11	23.57
5.10.11.4	2-	S27-8		-241	-27.11
5.10.11.5	3+	527-9		是江	24,18
5.10.11.6	<b>7</b> 3- <b>7</b>	▼ S27-10		-73.16	-27 62
		\$26-1, \$27-11		24.33	24,30
5.10.11.7	Band 4+ Surput Voltage	340-1, 32/-11	-		-

TEST S 30 Rev B 200-2 26-21

## 10.4 Performance test (continued)

			•
REF. PARA.	DESCRIPTION	POSITIONS LIMITS	MPASUREMENT PRIMARY REDUNDANT
5.10.11.8	Band 4- output voltage	\$26-1, \$27-12	- 23.84 -23.55
5.10.11.9	5,7+	<b>526-2, 527-1</b>	23.22 23.74
5.10.11.10	5,7-	Į <b>527</b> -2	- 23.16 - 27.56
5.10.11.11	6+	<b>527-3</b>	27.78 2337
5.10.11.12	Band 6-	<b>527-4</b>	·-23.41 -23.70
5.10.11.13	SMA Btr +	S27-5	24.54 25.66
5.10.11.14	Htr -	S27-6	-25.57 -25.78
5.10.11.15	+70	\$27 <b>-</b> 7	9.645 N/A
5.10.11	+7V	(S27-8 For RDT)	N/A 9.747
5.10.11	+290	S27~9	3237 N/A
5.10.11	+29V	(527-11 For RDT)	n/A 3281 €
5.10.11	-29V	S27-10	-32.84 H/A M
	SMA -29V	S26-2, (S27-12 for RDT)	N/A -32.60
5.10.11.18	Radiometer	S26-3, S27-2	9.628 10.10
5.10.11.19	CDVU	\$27-3	4.520 9 <u>E1</u>
5.10.11.20	Analog +	S27-4	27.62 2202
5.10.11.21	Analog -	S27-5	-3609 -26.09
5.10.11.22	Electromech.	S27-6	<u> </u>
5.10.11.23	Outgas	\$27 <b>-7</b>	165.40 104.02
5.10.11.24	Parasitic 🕏	S27-9	3/.23 N/A IN
	Parasitic output voltage	S26-3, (S27-10 for RDT)	N/A 3201 3
5.10.11.25	Band I+ TM output	S26-4, S28-5	4.325 <u>4.451</u>
5.10.11.26	1-	\$28-6	4.325
5.10.11.27	2+	S28-7	4.354 4.284
5.10.11.28	2-	S28-8	4.365 4.365
5.10.11.29	3+	S28-9	4.772 a.401
5.10.11.30	3-	S28-10	4.216 9.339
5.10.11.31	. 4+ .	S28-11	4418 4412
5.10.11.32	4-	\$26-4, \$28-12	41333 4351
5.10.11.33	Bend 5,7+ TM output	\$26-5, \$28-1	41235 41343



### TS 16603 Rev B \$2 2 2 26-81

#### 10.4 Performance test (continued)

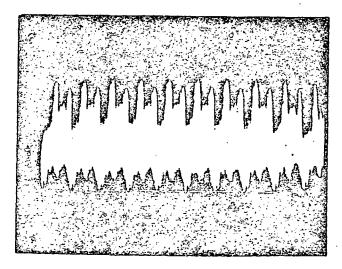
REF. PARA.	DESCRIPTION	DVM SWITCE POSITIONS	LIMITS	MZASU PRIMARY	BIDGEST REDUKDAKT
5.10.11.34	Bend 5,7- TM output	\$26-5, \$28-2		4:219	4.289
5.10.11.35	6+ 1	ı 528 <b>-3</b>		a118	4.228
5.10.11.36	Band 6-	S28-4		4.273	4.223
5.10.11.37	SMA Etr +	S28-5		4.479	4.687
5.10.11.38	Htr -	S28-6		4436	4.673
5.10.11.39	+7V	S28-7 (S28-8 for RDT)		5.945	6.005
5.10.11.40	+29V	\$28-9 (\$28-11 for		र 1414	4.497
5.10.11.41	SMA -29V	♥ RDT)  \$26-5, \$28-10 (\$28-12 for RDT)		3 <u>840</u>	3.847
5.10.11.42	Radiometer	\$26-6, \$28-2	•	5.327	5.475
5.10.11.43	CDVU	S28-3		र ततर	5.435
5.10.11.44	Analog +	S28-4		4.909	4.951
5.10.11.45	Analog -	, S28-5		4503	4.364
5.10.11.46	Electromech.	S28-6	•	5. <u>516</u>	5145
5.10.11.47	Outgas - TH output	S26-6, S28-7	<	5.248	5178
5.10.12.1	Bus voltage	S26-1, S27-1 (S27-3 for RDT)		35.00	3 <u>5,0</u> 0
5.10.12.2	Input bus current	S26-1, S27-2 (S27-4 for RDT)		3 <u>5.94</u>	3 <u>6.26</u>
5.10.12.3	SMA Etr + output voltage	\$26-2, \$27-5		71.55	21.98
5.10.12.4	Htr + ripple	Seen on Scope	≪30 mV pk-pk	40	40
5.10.12.5	Rtr - voltage	\$26-2, \$27-6		- 22.20	- 22.61
5.10.12.6	SMA Btr - ripple	Seen on Scope	<530 m√ pk-pk	40	40
5.10.12.7	CDVU voltage	\$26-3, \$27-3		7,593	7.751
5.10.12.8	CDVU ripple	Seen on Scope	√240 eV pk-pk	40	40
5.10.12.9	Outgas - output voltage	526-3, S27-7		8705	97.14
5.10.12.10	Outgas - output ripple	Seen on Scope	2.50V pk-pk	Boomi	350
.5.10.12.11	Parasitic output voltage	S26-3. S27-9 (S27-10 for RDT)		30.26	30.59
5.10.12.12	Parasitic output ripple	Seen on Scope	< 900 mV pk-pk	100	134



TS 16603 Rev B 18 December 1980

#### 10.4 Performance test (continued)

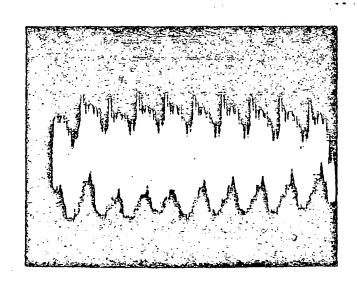
' CTC TRATIA	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	MEASU PRIMARY	REMENT REDUNDANT
MEF, PARA.	DESCRIPTION				
5.10.13.1	Input current telemetry	S26-4, S28-2 (S28-4 for RDT)		, <u>577</u> V	.508V
5.10.13.2	SMA Htr + output	\$26-5, \$28-5		3.940	4021
5.10.13.3	SMA Htr -	<b>\$26-5,</b> \$28-6	•	4.625	4.10 C
5.10.13.4	CDVU .	S26-6, S28-3		4.270	41355
5.10.13.5	Outgas output telemetry	S26-6, S28-7	• •	4.346	4.378
5.10.14.1	Photograph of reflected	input current rippl	e in outgas m	ode — PRIMAR	Y SIDE



(2=A) CURRENT/DIV: 2 mi AA.C.

(10us) SWEEP RATE: /Cui

5:10.14.1 rhotograph of reflected input current input in outgas mode - REDUNDANT SIDE



(2mA) CURRENT/DIV: 2 m A.c.

(10us) SWEEP RATE: 10 us



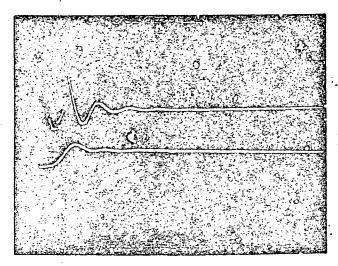
TS 16603 Prv B 18 December 1980

10.4 Performance test (continued)

AB : LT

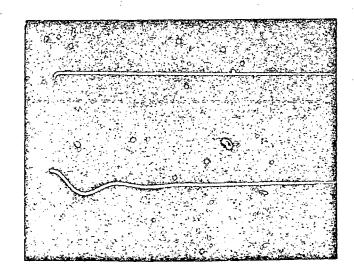
REF. PARA.	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	MEASUREMENT PRIMARY REDUNDANT
5.10.15.1.1	Input current with CDVU	S26-1, S27-2 (S27-4 for RDT)		34.77mv 34.43

5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is enabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: 2V (200mA) CURRENT/DIV: 200 m2 (1mS) SWEEP RATE: 124

5...... output voltage as CDVU load is disabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: 20 (200mA) CURRENT/DIT: 200 m A (2ms) SWEEP RATE: 1 25



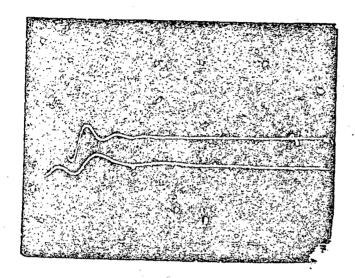
Rev B 18 December 1980

#### 10.4 Performance test (continued)

. PARA.

· DESCRIPTION

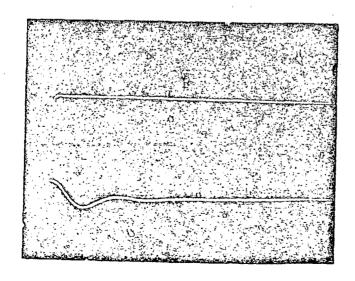
5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is enabled — REDUNDANT SIDE



(2V) VOLTAGE/DIV: 20 (200mA) CURRENT/DIV: 200 m

(lms) SWEEP RATE: 1295

5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is disabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: 20 (200mA) CURRENT/DIV: 200 mm

(2ms) SWEEP RATE: 18915

530 530

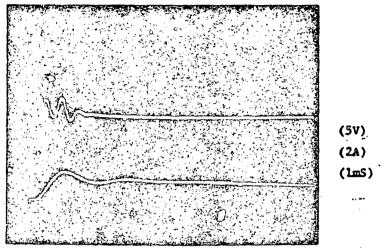
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

TO LATE

		DVH SWITCH			REMENT
_F. PARA	DESCRIPTION	POS IT IONS	LIMITS	PRIMARY	REDUNDANT
5.10.15.2.1	Input bus current with outgas disabled	\$26-1, \$27-2 (\$27-4 for RDT)		12.475 x	nc <u>36.3</u> 6

5.10.15.2.2 Fnotograph of input bus current and outgas voltage as outgas load is enabled - PRIMARY SIDE

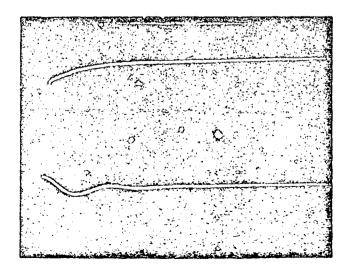


(5V) VOLTAGE DIV: 51

(2A) CURRENT/DIV: 2,42

(lms) SWEEP RATE: /m <

5.10.15.2.2 Photograph of input bus current and outgas voltage as outgas load is disabled - PRIMARY SIDE



(SV) VOLTAGE/DIV: 51

(2A) CURRENT/DIV: 2 A

(2mS) SWEEP RATE: / .:: 5

220



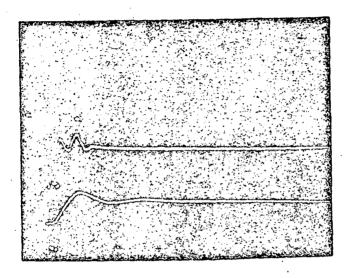
TS 16603 Rev B 18 December 1980

#### 10.4 Performance test (continued)

PARA.

DESCRIPTION

5.10.15.2.2 Photograph of input bus current and outgas voltage as outgas load is enabled - REDUNDANT SIDE

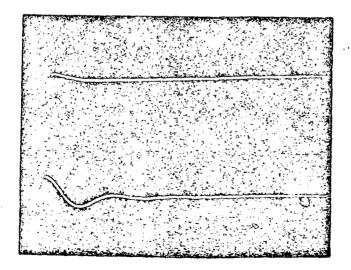


(5V) VOLTAGE/DIV: SU

(2A) CURRENT/DIV: 7H

(500us) SWEEP RATE: (12)

5.10.15.2.2 Photograph of input bus current and outgas voltage as outgas load is disabled - REDUNDANT SIDE



(5V) VOLTAGE/DIV: 50

(2A) CURRENT/DIV: 2H

(1ms) SWEEP RATE: /:n5

#### 10.4 Performance test (continued)



#### Rev B 20 Description 1990 BEN-2 94-81

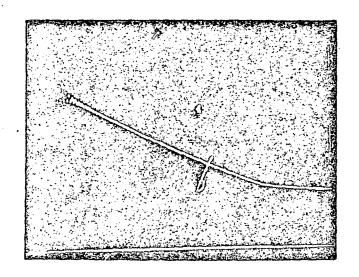
			473 : 1.455	
REP. PARA.	DESCRIPTION	DVM SWITCH POSITION	LDUIS	MEASUREMENT PRIMARY REDUNDANT
5.10.16.1	BPS voltage	S26-1, S27-1 (S27-3 for RDT)		35,05 (49) 35.00
5.10.16.2	BPS current	S26-1, S27-2 (S27-4 for RDT)		15:37# (50) /5:83
5.10.16.3	SMA Htr +output voltage	\$26-2, \$27-5		21.97 (13) 22.31
5.10.16.4	SMA Htr +load current	S26-8, S34-1		47.16-1,08,45.69
5.10.16.5	SMA Htr -output voltage	S26-2, S27-6		- 22.29 (-, 22.75
5.10.16.6	SMA Htr -load current	S26-8, S34-2		-9.79 m/39 5.95
5.10.16.7	CDVU output voltage	S26-3, S27-3		7.59 60, 7.74
5.10.16.8	CDVU load current	S26-8, S34-10		·276 U (45) ·276
5.10.16.9	Parasitic output voltage	\$26-3, \$27-9 (\$2 <b>7-</b> 1	10)	30.5% (23) 31.52
5.10.16.10	Parasitic load current	S26-8, S34-7		142,77MV 146.86
5.10.16.11	Input power (5.10.16.1 x 5.10.16.2)			53.872 55.405
5.10.16.12	Output power ((5.10.16.3 x 5.10.16.4) + (5.10.16.5 x 5.10.16.6) + (5.10.15.7 x 5.10.16.8) + (5.10.16.9 x 5.10.16.10	DNA DNA	- -	17.395 18.131
5.10.16.13	Efficiency ((5.10.16.12) ÷ (5.10.16.11))			32.3% 32.7%



TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

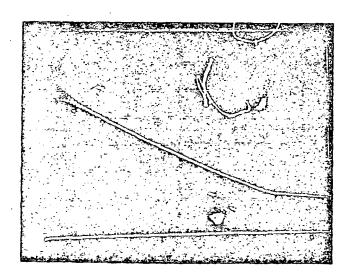
5.10.17.1 Photograph of input bus current and input bus voltage as is disable - PRIMARY SIDE



(5V) VOLTAGE/DIV: 5V
(2A) CURRENT/DIV: 2P

(1ms) SWEEP RATE: 1/215

5.10.17.1 Photograph of input bus current and input bus voltage as is disabled - REDUNDANT SIDE



(5V) VOLTAGE/DIV: 50 (2A) CURRENT/DIV: 2A

(lms) SWEEP RATE: / ... 5

223



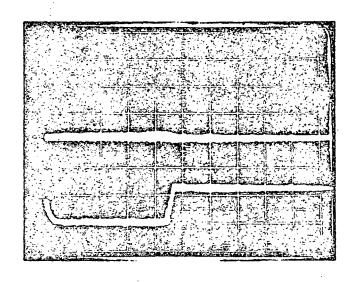
TS 16603 Rev B 18 December1980

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10.4 Performance test (continued)

5.10.17.2 Unit stays off (check)

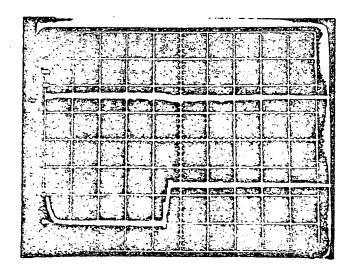
5.10.17.3 Photograph of input bus current and input bus voltage as is enabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: (2A) CURRENT/DIV:

(100ms) SWEEP RATE: 100 m

5.10.17.3 Photograph of input bus current and input bus voltage as as is enabled - REDUNDANT SIDE



VOLTAGE/DIV: CURRENT/DIV:

S) SWEEP RATE:

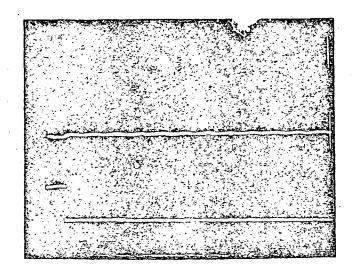


15 10003 Rev B 18 December 1980

FEE: 478

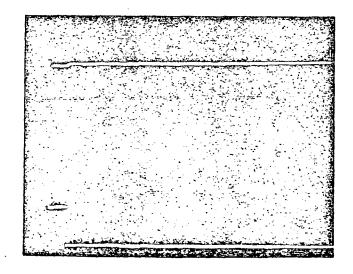
10.4 Performance test (continued)

5.10.17.4 Photograph of input bus current and input bus voltage as is disabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: SU
(2A) CURRENT/DIV: 2A
(10ms) SWEEP RATE: 10 275

5.10.17.4 Photograph of input bus current and input bus voltage as is disabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: 5V
(2A) CURRENT/DIV: 2A
(10ms) SWEEP RATE: On See

225



TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

DESCRIPTION

F. PARA

DVM SWITCH

LIMITS

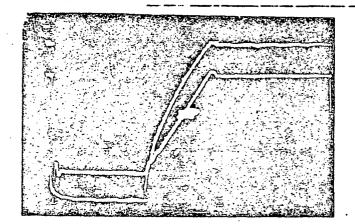
MEASUREMENT

PRIMARY REDUNDANT

5.10.17.5 Record that UUT operates correctly.

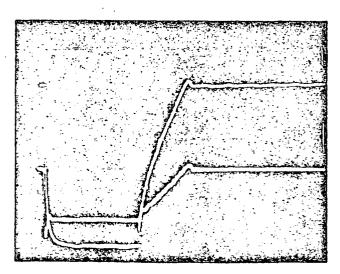
5.10.18.1 Photograph of input bus current and MUX output voltage as MUX enable command is issued (all loads are ON except outgas) - PRIMARY SIDE

POSITIONS



(5V) VOLTAGE/DIV: (5A) CURRENT/DIV: (20mS) SWEEP RATE:

5.10.18.2 Photograph of input bus current and parasitic output voltage as parasitic." enable command is issued (all loads are ON except outgas) - PRIMARY SIDE



(5V) voltage/div: 5 (5A) CURRENT/DIV: \_2

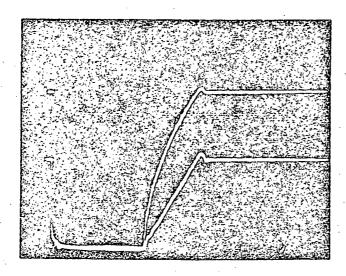
(20ms) SWEEP RATE: Oms



TS 16603 Rev B 18 December 1980

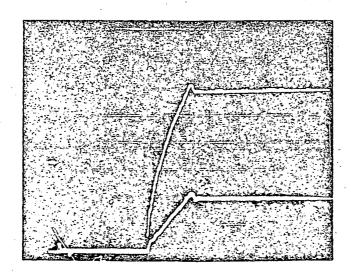
10.4 Performance test (continued)

\$10.18.1 Photograph of input bus current and MUX output voltage as MUX enable command is issued (all loads are ON except outgas) — REDUNDANT SIDE



(5V) VOLTAGE/DIV: 5V (5A) CURRENT/DIV: 2A. (20ms) SWEEP RATE: 10 m C C

o.10.18.2 Photograph of input bus current and MUX output voltage as parasitic enable command is issued (all loads are ON except outgas) — REDUNDANT SIDE





#### Performance test (continued)

	_		
Æ	3	4	78

BEF PARA	DESCRIPTION .	DVM SWITCH POSITIONS	LDATES	Masu Primary	REMENT REDUNDANT
5.10.18.4	Undervoltage Trip Point (ON/OFF)	\$26-1, \$27-1 (\$27-3 for RDT)	18.0 ±1.50V	15.11	18.06
5.10.18.5	UUT stays OFF			1/	
5.10.18.6	Undervoltage Trip Point (OFF/ON)	S26-1, S27-1 (S27-3 for RDT)	19.0 ±1.50V	18.90	18.895
5.10.18.7	Overvoltage Trip Point	S26-1, S27-1 (S27-3 for RDT)	38.0 ± 2V	35.25	36.81 SE
5.10.18.8	UUT stays OFF	•		<u> </u>	
5.10.18.9	UUT turns ON			<u></u>	7

TS 16603 Rev B 18 December 1980

10.4 PROTOFLIGHT	Performance test - Long		s/n 004	TEMPERATUR	e: Ambine
IN-PROCESS_	11/1	NA.	OR ACCEPTANCE	_ /	
TESTING PHA	10		INE VOLTAGE:	23.0	VOLTS
		DVM SWITCH		Measu	REMENT
REF. PARA.	DESCRIPTION	POSITIONS	LIMITS	PRIMARY	REDUNDANT
5.10.1.1	Calibrate cmd gen		V.	6-2000	
5.10.2.1	Input bus current	S26-1, S27-2 (S27-4 for redundant)		0.236mV	0228
5.10.2.2	MUX cutput voltage	S26-3, S27-1	30.0 ±0.90V	2994Y	130.27
5.10.2.3	MUX load current	S26-3, S27-12	3.55 ±0.40A	32.24 V	32.64
The rest of	Section 5.10.2 require	es only checking	g voltage - in	dicate by ch	eckmarks.
	•		•		
5.10.2.4.1	B1 + output voltage	S26-1, S27-5	•		
5.10.2.4.2	B1 -	S27-6	<del></del> .		
5.10.2.4.3	B1 -	S27-5			
5.10.2.4.4	B1 +	S27-7			
5.10.2.5.1	B2 +	S27 <b>-</b> 7		V	
5.10.2.5.2	B2 -	S27 <del>-</del> 8		~	-
5.10.2.5.3	B2 -	S27-8		V	
5.10.2.5.4	B2 +	S27-7		·	
5.10.2.6.1	B3 +	\$27 <del>.</del> 9		V	
5,10.2.6.2	B3 -	S27-10			
5.10.2.6.3	B3 -	S27-10			
5.10.2.6.4	B3 +	S27-9		V	7
5.10.2.7.1	84 +	S27-11			
5.10.2.7.2	B4 -	S27-12	•	~	
5.10.2.7.3	B4 -	\$ \$27-12		V	_
5.10.2.7.4	B4 +	S26-1, S27-11		V	
5.10.2.8.1	B5,7+	S26-2, S27-1		<u> </u>	
5.10.2.8.2	B5,7-	S27-2		V V V	ען נונו וועונונו
5.10.2.8.3	E5,7-	S27-2		<u> </u>	_
5.10.2.8.4	B5,7+	S27-1		V	V
5.10.2.9.1	B6 +	\$27-3		1	
	v	<b>▼</b>		. /	

TS 15603 Rev B

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## 10.4 Performance test (continued)

ret fara.	DESCRIPTION	TOWN SHITCE	LMTS	MEASUREMENT PRIMARY REJURDANT
5.10.2.9.3	-	- 526-2, S27-4		
5.10.2.9.4	95 + output voltage	\$26-2, \$27-3		V /
5.10.2.10.1	SMA EIR + cutput voltag	e   -527-5		<b>V</b>
5.19.2.10.2	1 - 1	- 527-6		V
5.10.2.10.3	•	S27-6	•	
1.10.1.10.4	-	··· ♥ \$27-5		<u>~</u> ~
1.15.2.1.1.	-77	525-2, 527-7		<u> </u>
3.10.2.11.2		(\$27-8 for EDI)	•	
5.10.2.12.1	-197	\$26-2, 527 <del>-9</del>		······································
·		(S27-11-for BDT)		
5.10.2.12.2	-297	S26-2, S27-10		
,		(S27-12 for RDI)		
5.10.2.12.3	-297	\$26-2, 527-10	grander of the second	
5.10.2.12.4	SMA ETR -29V	_\$26-2;::\$27 <b>-</b> 9		and the same of th
5.10.7.13.1	Radiometer	\$26-3, \$27-2	•	
5.10.2.13.2	Radiometés	527-2		
5.10.2.14.1		-:- \$27 <b>-</b> 3		
5.10.2.14.2	ದಾಗಾ	ःह <u>ा</u> ड-27-3	. <b>.</b>	
5.10.2.15.1	+ golack	577-4	, .	
5.10.2.15.2	Analog -	527-5		
5.10.2.15.3	Analog	\$27~3		
5.10.2.15.4	Analog +	\$27-4		
5.10.2.16.1	Electromeci.	S27-6		<u> </u>
5.10.2.16.2	Electromech.	527-6		
5.10.2.17.1	Outgas output voltag	e \$26-3, \$ <del>27-</del> 7		
5.10.3.1	Bus voltage	526-1, 527-1		
	•	(527-3 for EDT)		23.06 V/49/23.05
5.10.3.2	MIX load current	\$26-3, \$27-12	4.130 <u></u> 0.	0234 41.06 V 41.44
5.10.3.3	Bus current	\$26-1, \$27-2		<del></del>
		(\$27-4 for EDI)		15627 (50) 158.84
5.10.3.3.2	3PS Voltage	526-1, 527-1		agal il agail
		527-3)		LET PO LICE AL
5.10.3.3.3	BPS Current	\$26-1, \$27-2 (\$27 <del>-4</del> )	••.	TOTOPY DESTAN
5.10.3.3.4	MIX Current	.526-3, \$27-12		4135 14150

TS 16603 Rev B 18 December 1980

## 10.4 Performance test (continued)

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REF. PARA.	DESCRIP	TION	DVM SWITCH POSITIONS	LIMITS	MEASUREMENT PRIMARY REDUNDANT
5.10.3.4.1	B1 + output	t voltage	\$26-1, S27-5	20.50 ±2.50V	20.46 (1) 20.60
5.10.3.4.2	BI + output	ripple	Look on Scope	<600 mV pk-pk	<u> 40</u>
5.10.3.4.3	B1 - output	voltage	\$26-1, \$27-6	-20.50 -2.50V	-10.48 (2)-20,62
5.10.3.4.4	B1 - output	ripple	Look on Scope	. <500 mV pk-pk	30 30
5.10.3.5.1	B2 + output	t voltage	S26-1, S27-7	20.50 ±2.50V	20.31 (3) 20.46
5.10.3.5.2	B2 + output	ripple	Look on Scope	≪600 mV pk-pk	30 40
5.10.3.5.3	B2 - output	voltage	S26-1, S27-8	-20.50 ±2.50V	-2034 (4)-20.49
5.10.3.5.4	32 - output	ripple	Seen on Scope	<600 mV pk-pk	30 ''' 40
5.10.3.6.1	B3 + output	voltage	S26-1, S27-9	20.50 ±2.50V	20.41 (5) 30.42
5.10.3.6.2	B3 + output	ripple	Seen on Scope	<500_mV pk-pk	. <u>\$0</u> " <u>40</u>
5.10.3.6.3	B3 - output	voltage	S26-1, S27-10	-20.50 ±2.50V	-20.36 (6) -20.50
5.10.3.6.4	B3 - output	ripple	Seen on Scope	<600 mV pk-pk	30 2
5.20.3.7.1	B4 + output	: voltage	S26-1, S27-11	20.50 ±2.50V	20.43 (7) 2060
5.10.3.7.2	. B4 + output	ripple	Seen on Scope	<600 mV pk-pk	30 20
.10.3.7.3	B4 - output	: voltage	S26-1, S27-12	-20.50 ±2.50V	-20.46 (8)-20.62
5.10.3.7.4	B4 - output	: ripple	Seen on Scope	≪600 mV pk-pk	30 " 30
5.10.3.8.1	B5,7 +	voltage	\$26-2, \$27 <b>-1</b>	20.50 ±2.50V	20.30 9 20.16
5.10.3.8.2	B5',7 +	ripple	Seen on Scope	≪500 mV pk-pk	30 "50
5.10.3.8.3	B5,7 -	voltage	S26-3, S27-2	-20.50 ±2.50V	-20.19 (10)-20.19
.5.10.3.8.4	B5,7 -	ripple	Seen on Scope .	≪600 mV pk-pk	<u> 40                                   </u>
5.10.3.9.1	B6 +	voltage	S26-2, S27-3	20.50 ±2.50V	20.37 (11) 20.51
5.10.3.9.2	B6 +	ripple	Seen on Scope	≪500 mV pl -pk	30 50
5.10.3.9.3	.B6 -	voltage	S26-2, S27-4	-20.50 ±2.50V	-20.3-7 (12) -20.54
5.10.3.9.4	B6 -	ripple	Seen on Scope	<500 mV pk-pk	30 30
5.10.3.10.1	SMA Htr +	voltage	\$26-2, \$27-5	21.20 ±2.12V	22.2/ (13) 22.42
5.10.3.10.2	SMA Rtr +	ripple	Seen on Scope	<530 mV pk-pk	30 30-
5.10.3.10.3	SMA Htr -	voltage	S26-2, S27-6	-21.20 ±2.12 V	-23.65 (14)-22.87
5.10.3.10.4	SMA Htr -	ripple	Seen on Scope	≪630 mV pk-pk	<u>30 30 </u>
.5.10.3.11.1	SMA +7♥ ♥	voltage	S26-2, S27-7 (S27-8 for RL <sup>-</sup> )	7.10 ±0.80V	7.656 (15) 7.759
5.10.3.11.2	SMA +7V out	put ripple	Seen on Scope	210 mV pk-pk	20 30

Ts 16603 Rev B 18 Dacember 1980

#### 10.4 Performance test (continued)

			DRE SWITCH		exacurement
PEF PARA	DESCRIPTI	ON	PASITIORS	LDays	PRIMARY BUDGISPANT
3.13.3.12.1	<u>594</u> +29₹ out	put voltage	826-2, S27-9 (S27-11 for RDT)	29.50 ±1.567	36.36 (14)32.58
5.10.3.12.2	524A +29V	ripple	Seen on Scope	<870 mV, pk-pi	k <u>50 .50</u>
5.10.3.12.3	SMA -29₹	voltage	\$25-2, \$27-10 (\$27-12 for RDT)	-29.50 ±1.50V	-30.34(17)-30.60
5.10.3.12.4	514A -29₹	ripple	Seez oz Scope	<870 mV pix-pix	<u>50                                    </u>
5.10.3.13.1	MIX	voltage	\$2 <del>6-</del> 3, \$27-1	30.00 ±0.907	30.09 (18) 30.28
5.10.3.13.2	MOX	ripple	Sean on Scope	<900 mV, pk-pl	k 50 60
5.10.3.14.1	Radiometer	voltage	S26-3, S27-2	8.50 ±0.857	8. Syt (n) E.S.Z
5_10.3.14.2	Radiometer	ripple	Seen on Scope	√250 mg pk-pk	<b>a</b>
5.10.3.15.1	CDVU	voltage	526-3, S27-3	8.00 ±0.807	7.600 600 2.709
5.10.3.15.2	CDVU	ripple	Seen on Scope	√40 m² pix-pix	
5.10.3.16.1	Analog +	voltage	526-3, S27-4	21.20 ±2.12V	22.40 (a) 22.52
3.10.3.16.2	Analog +	ripple	Seen on Scope	≪30 aV pk-pic	30 30
4.10.3.16.3	Amalog -	voltage	\$26-3, \$27-5	-21.20 <u>+</u> 2.127	-224662-2257
.0.3.16.4	Anglog -	ripple	Seen on Scope	≪630 mV pk-pk	40 30
5.10.3.17.1	Electromech.	voltage	S26-3, S27-6	33.40 ±3.347	32.99 @33.28
5.10.3.17.2	Electromech.	ripple	Seen on Scope	<.07 pk-pk	30 40
5.10.3.18.1	Outgas 💡	voltage	526-3, 527-7	100.0 <u>+</u> 12.07	102.39 102.04
5.10.3.18.2	outgas out	prt ripple	Seen on Scope	<.07 pk-pk	90 00
5.10.4.1	Input curren	t telesetry	526-4, S28-2 (S28-4 for RDT)		4.787 4.748
5.10.4.2.1	Rand 1 + vol	t. telestry	\$26-4 <b>,</b> \$28-5	•	1717 1.768
5.10.4.2.2	Bend 1 -		528-6		3.728 3.754
5.10.4.3.1	Band 2+		S28 <b>-</b> 7		3.697 3.732
5.10.4.3.2	Send 2-		S28-8		2658 7.712
5.10.4.4.1	Band 3+		S28-9		3.714 3.719
5_10.4.4.2	Band 3-		S28-10		3.715 3.739
5_10.4.5.1	Rend 4+	1	528-11		3.211 3.746
5.10.4.5.2	Rand 4-		\$2 <del>6</del> -4, \$28-12		3.723 2751
5_10.4.6.1	Band 5,7+	*	\$26-5, \$28-1		3.694 3689
5.10.4.6.2	Band 5,7- vo	lt. telemetry	S26-5, S28-2		7.680 3678

## 10.4 Performance test (continued)

		DVM SWITCR			SURPERT
PARA.	DESCRIPTION	POSITIONS	LIKITS	PRIMARY	REDUNDANT
5.10.4.7.1	Band 6 + volt. telement	S26-5, S28-3	•	78AS	9.719
5.10.4.7.2	Band 6 -	· 528-4		3. 20	3.750
5.10.4.8.1	SMA Btr +	≈ S28-5		4053	4.03
5.10.4.8.2	SMA Btr -	528-6	•	4-107	4.175
5.10.4.9	SHA +7V	\$26-5, \$27-7 (\$27-8 for RDT)	•	-4.981	4.965
5.10.4.10.1	SMA +29V	S26-5, S28-9 (S27-11 for RDT)		4.165	4.221
5.10.4.10.2	SMA -29V	\$26-5, \$28-10 (\$27-12 for RDT)		7.955	3.918
5.10.4.11	MUX	_\$26-6, \$28-1		4.269	4.299
5.10.4.12	Radiometer	S26-6, S28-2	• • •	4.697	4.691
5.10.4.13	CDVD	\$26-6, \$28-3		4.230	4.328
5.10.4.14.1	Analog + volt. telemt	±ry \$26-6, \$28-4	••	4.005	4.023
5.10.4.14.2	Analog -	-: \$26-6°, \$28-5		3.932	3.90
.10.4.15	Electromech.	\$28-6	-	4.051	4 <u>087</u>
5.10.4.16	Outgas volt. telemetr	ry \$26-6, \$28 <b>-7</b>	•	5.00	5,00
5.10.5.1.1	Analog + load current	= \$25-3, 527-11 mV	10. e. Amps	15.5/5	6H 15103
5.10.5.1.2	MUIX	.\$26-3, \$27-12 mV	- 10 - Amps	:41.360	W. III
5.10.5.1.3	Band 1 +	\$26-7, \$34-1 mV	.0.5 = mA	91.02	DO PLES
5.10.5.1.4	Band 1 -	S34-2	1	-91.20	(27)=9/17
5.10.5.1.5	2 +	S34-3	<b>1</b>	99.15	20)
5.10.5.1.6	2 -	534-4		- MM	127) 71.62
5.10.5.1.7	3 +	.S34-5		92.93	(50) The
5.10.5.1.8	3 -	s34 <b>-</b> 6	-	- 9033	(1) 2.33
5.10.5.1.9	4 +	S34-7	<b>j</b>	% <u>.90</u>	(12) 21.63
5.10.5.1.10	4 -	s34-8	İ	- 90.60	(1) 91.23
5.10.5.1.11	5,7 +	s34-9	•	: 12.85°	n. 9158
5.10.5.1.12	5,7 -	S34-10	]	- 9 <u>03</u>	():) 27.29
5.10.5.1.13	6 +	y 534-11		4315	(: (F.69
5.10.5.1.14	Band 6 -	\$26-7, \$34-12	I		0:-4757
5.10.5.1.15	SMA Htr + 1	\$26-8, \$34-1 mV			ne) \$333
5.10.5.1.16	SMA Htr - losd curren	st S26-8, S34-2 mV	P TEA	-896	09) 7.024

TS 16603 Nev B

BEN-2 F-4-81 BCAJ-3 H/3/BJ

#### 10.4 Performance test (continued)

REF. PARA.	DESCRIPTION	POSITIONS	LPHTS	PRIMARY REDUNDANT
5.10.5.1.17	SMA +29V load current	826-8, S34-3 mV	÷ 0.402 = 184	50.74 (4) 57.13
5.10.5.1.18	SP4A -29V	834-4 BV	+ 0.402 - m4 -	50.48 (4)-50.92
5.10.5.1.19	SMA +7V	. 1		37 <u>8.3-</u> (40)281.9
5.10.5.1.20	Analog -	534-6 BV		2693 (43-270.8
5.10.5.1.21	Radiometer	534-9 BV	+ 0.5 = ₽A	152.90 (4) (57.04
5.10.5.1.22	CDVU .	\$34-10 BV	+ 0.5 = TA	271.3 年9275.6
5.10.5.1.23	Electromech. load current	526-8, 534-11 mg	÷ 0.402 = 184	210.0 (4)211.3
5.10.5.2.1	Bus power supply voltage	\$26-1, \$27-1 (\$27-3 for RDT)		23.06 8723.04
5.10.5.2.2	Bus input current	\$26-1, \$27-2 EV (\$27-4 for RDT)		157.66(41)159.07 3.563
5.10.5.2.3	PIN (Section 5.10.5)		D.S. Berry	AB-H 34.697.
5.10.5.2.4	PIN (Section 5.10.3)	·		360.358 366.126 FC
5.10.5.2.5	P <sub>DN</sub> (evg)		181.4	361.86 366.3M
5.10.5.2.9	Imput current at current	limit	26-1, 27-2 (26-1 27-4 Edt	
	Imput voltage at current	limit	27-1 (27-3 Edt	2 <u>2.83</u> 4 2 <u>2.8</u> 34
	MUX voltage at current li	mit	26-3, 27-1	29.03V 27.73
	MOX current at current li	est	27-12	36.23~V 4904~V
5.10.5.3.1	POUT	•		270.317 275.98
5.10.5.3.2	Efficiency		<b>&gt;</b> 70%	75.18% 75.21%

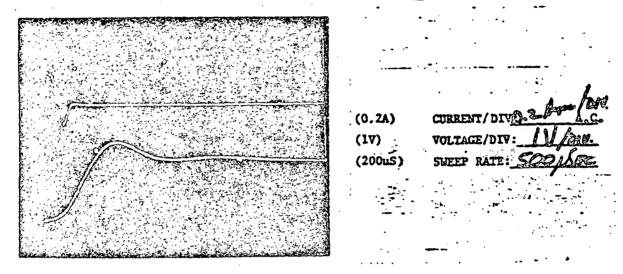
Unit rough #3# 750 75360 10007 rough #1# 750 75360 ANE TWANT ROUER# 361 961 UNTRUT ROUGH# 270 717 ERRICHIEMON # 75 18 405 1 FOURER #2# 366 40718 105757 FOWER# 366 1262 ANE THEOREM 277 911 ERRICHEMON # 75 37

TS 16603 Rev B 18 December 1980

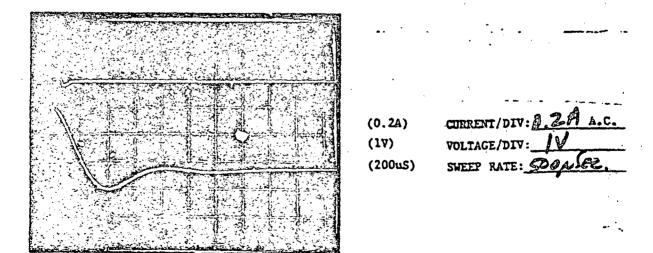
10.4 Performance test (continued)

		DVH SWITCH	•	MEASUREMENT
EF. PARA.	DESCRIPTION	POSITIONS	LIMITS	PRIMARY REDUNDANT
5.10.6.1	+7V output pulsed	\$26-2, \$27-7 (\$27-8 for RDT)	7.10 ±0.80V	6.9224-7.002V

5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V output is being pulse-loaded-PRIMARY SIDE



5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as pulse-lead on SMA +7V outputs is being removed - FRIMARY SIDE



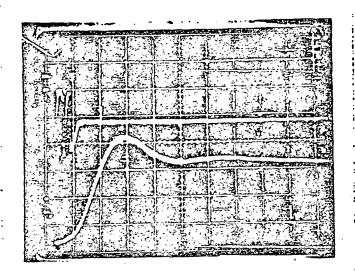
TS 16603 Rev B 18 December 1980

#### 10.4 Performance test (continued)

KEF PARA

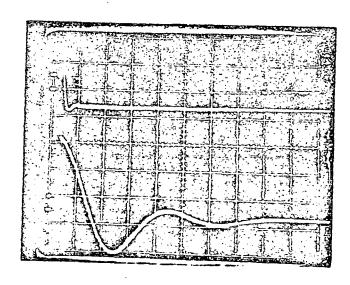
DESCRIPTION

5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V output is being pulse-loaded-REDUNDANT SIDE



(0.2A) CURRENT/DIV: 2A A.C.
(IV) VOLTAGE/DIV: 1V
(2000S) SHEEP RATE: 500 ASEC.

5.10.6.2 Photograph of transients induced on input bus current and SMA-+79 output voltage as pulse-load is being removed-REDUNDANT SIDE



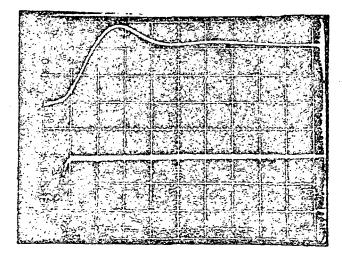
(0.2A) CURRENT/DIV: AA.C.
(1V) VOLTAGE/DIV: IV
(200us) SWEEP RATE: SDOPSEC.

TS 16603 Rev B \$9—Berenker\_1080 SCot-2 %-6-Dy

#### 10.4 Performance test (continued)

	DESCRIPTION	DVM SWITCH POSITIONS LIE	DEASTARDAST PROCESSANT
5.10.6.3	Input bus current	\$26-1, \$27-2 67. \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	
5.10.6.4	SMA +7V TM- pulsed	S26-5, S28-7 (S28-8 for RDT)	4.490V 4.643V
5.10.6.5	SMA +7V load current- pulsed	(\$26 <b>-</b> 8, \$34 <b>-</b> 5	· 4568 46334
. 10 ( /	9)		and CMA 470 1

5.10.6.6 Photograph of transients induced on input hus current and SMA +7V load current as SMA +7V output is being pulse-loaded-PRIMARY SIDE

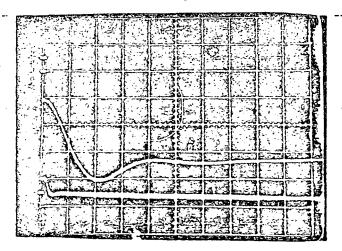


(1A) \* SMA CURRENT/DIV: 01 4/B (RA) BUS CURRENT/DIV: 200 COO (200us) SWEEP RATE: 500 SCE

\* Using 0.1\_s\_shunt ens 100 aV/Div on scope

SMA CURRENT

5.10.6.6 Photograph of transients induced on input bus current and SMA +7V load current as pulse-load is being removed-PRIMARY SIDE



(LA) - SMA CURRENT/DIV: 0.14/0

(MA) BUS CURRENT/DIV: 200 mg
(200 us) Sweep rate: 500 m Sec

Farradas A 1 s abunt and

SMA Company of Scope

TS 16603
Rev B

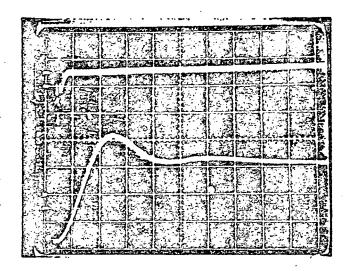
10 December 1800
SEA-R B.- RI

#### 10.4 Performance test (continued)

REF. PARA

DESCRIPTION

5.10.6.6 Photograph of transients induced on input bus current and SMA + 7V load current as SMA + 7V output is being pulse loaded - REDUMDANT SIDE



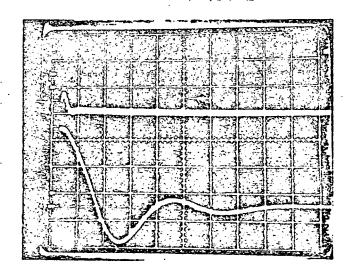
(1A)\* SMA CURRENT/DIV: 3.1V

(2A) BUS CURRENT/DIV: 1.2 A

(200us) SWEEP RATE: SOME

\*Veing 0.1 shunt and 100 mV/Div on scope. 2

5.10.6.6 Photograph of transients induced on input bus current and SMA + 7V load current as pulse-load is removed - REDUNDANT SIDE



(1A) \* SMA CURRENT/DIV: D. IV

(2A) BUS CURRENT/DIV: D. RA

(200as) SWEEP RATE: SOOPSE.

\*Using 0.1 \_shunt end 100mV/Div on scope.

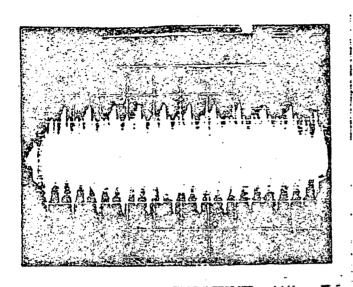
TS 16603. Rev B 18 December 1980

10.4 Performance tast (continued)

FF PARA

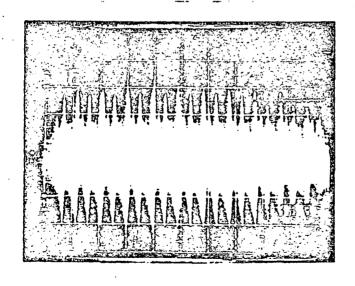
DESCRIPTION

.10.7.1 Photograph of reflected input current ripple - FRIMARY SIDE



(1ma) CURRENT/DIV 2 A.C. A.C. (2005) SWEEP RATE: Des Care

5.10.7.1 Photograph of reflected input current ripple - REDUNDANT SIDE



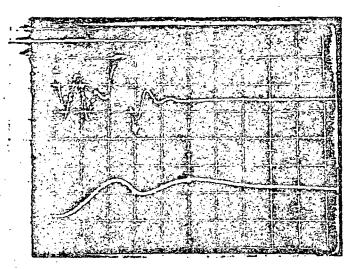
(10us) SWEEP RATE: 10 SEC.

5.10.8.1.1 Input current - full load S26-1, S27-2 (S27-4 for RDT)

156.16~V 158.723 126.90~V 127.43

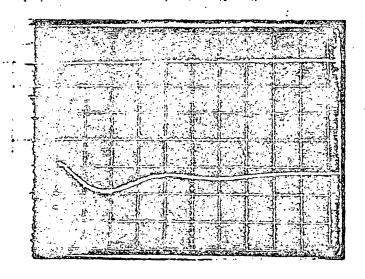
5.10.8.1.2 Input current w/o analog: Same

5.10.8.1.3 Photograph of transients induced on input bus current and analog + voltage as analog output is enabled - PRIMARY SIDE



(2V) VOLIAGE/DIV: 2V
(1A) CURRENT/DIV: 2/40
(500us) SWEEP RATE: SOONSe

5.10.8.1.3 Protograph of transients induced on input bus current and analog + voltage as analog output is disabled - PRIMARY SIDE



(5V); VOLTAGE/DIV: ZV.

(1A) CURRENT/DIV: ZAM

(1ms) SWEEP RATE: SOOME

ORIGINAL PAGE IS OF POOR QUALITY

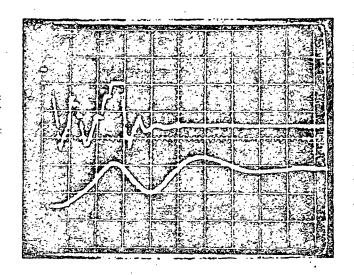
TS 16603 Rev B IR December 1980

10.4 Performance test (continued)

PEF. PARA.

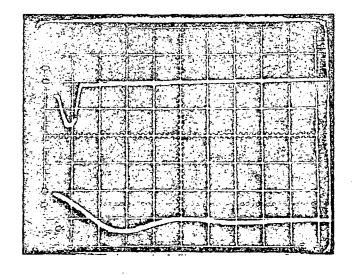
DESCRIPTION

5.10.8.1.3 Photograph of transients induced on imput bus current and enalog + susput voltage as analt, output is enabled - MIDWOART SIDE.



(2V) VOLIAGE/DIV: 24 (14) CTREST/DIV: 24 (500us) SWEET RATE: SDOWSE.

5.10.5.1.3 Photograph of transients induced on input bus current and analog + ourput voltage as analog output is disabled - MEDUNDANT SIDE.



(SV) VOLIAGE/DIV: 21 (1A) CURRENT/DIV: 21. (1ms) SWEET RATE: SCOALER.

TS.16603 Rev B 18 December 1980

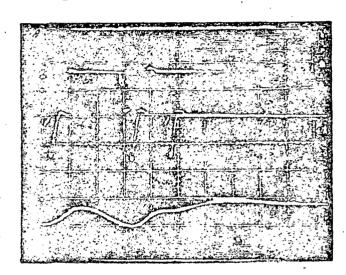
10.4 Performance test (continued)

DVM SWITCH

EF, PARA. DESCRIPTION POSITIONS LIMITS PRIMARY REDUNDANT

J.10.8.2.1 Input bus current w/o CMA: S25-1, S27-2 +7V load (S27-4 for EDT) 146.70 V 145.19

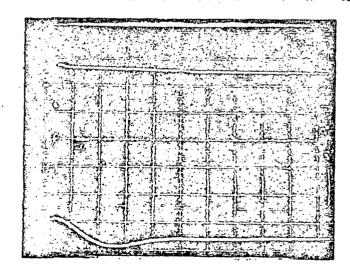
5.10.8.2.2 Photograph of transferts induced on imput bus contract and SMA +77 output voltage as SMA +77 is enabled - PRIMARY SIDE.



(5V) VOLTAGE/DIV: 2V
(1A) CURRENT/DIV: 10-2.

(2002s) sweet rate: <u>FogleS</u>e

5.10.8.2.2 Photograph of transients induced on imput bus current and SMA +7V output voltage as SMA +7V is disabled - PRIMARY SIDE.



(2V)

VOLTAGE/DIV:

(1A)

CURRENT/DIV: /

· (2mS)

SWEEP RATE: 500

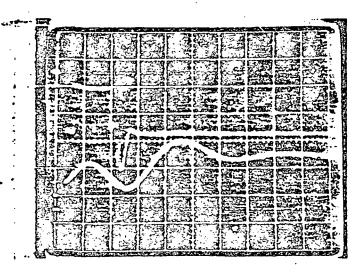
500 ps

TS 16603 Rev B 18 December 1980

#### 10.4 Performance test (continued)

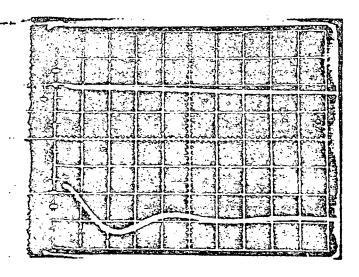
FF PARA, DESCRIPTION

5.10.8.2.2 Photograph of transients induced on input bus current and SMA +7 output voltage as SMA +7V is enabled - REDUNDANT SIDE



(5V) VOLTAGE/DIV: 2V
(1A) CURRENT/DIV: 1Ap
(200us) SWEEP RATE: 5000566.

5.10.8.2.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V is disabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: ZV
(1A) CURRENT/DIV: TOO
(2ms) SWEEP RATE: 500 PSE.

TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

Imput bus current w/o

DESCRIPTION

SMA +29V load

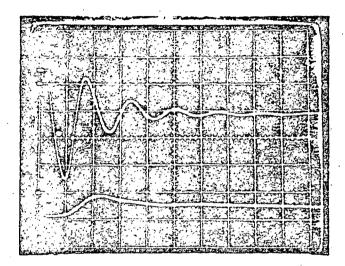
EF. PARA.

5.10.8.2.3

DVM SWITCH
POSITIONS
LIMITS
PRIMARY REDUNDANT

\$26-1, \$27-2
(\$27-4 for RDT)

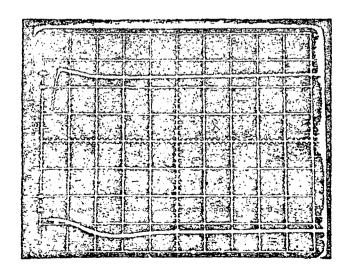
5.10.8.2.4 Photograph of transients induced on input bus current and SMA +29V output voltage as SMA +29V is enabled - PRIMARY SIDE



(2V) VOLIMEZ/DIV: 1V (0.5V) CUERENT/DIV: 0.5A

(lins) SWEET PATE: 500 pt

5.10.8.2.4 Photograph of transients induced on input bus current and SMA +29V output voltage as SMA +29V is disabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: (0.5A) CURRENT/DIV: 0.5A

(lms) sweep rate: Sogal R

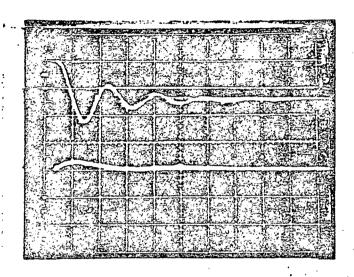
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

EF. PARA.

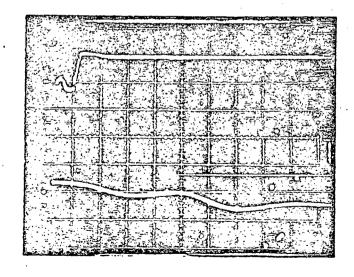
DESCRIPTION

5.10.8.2.4 Photograph of transients induced on input bus current and SMA +29V output voltage as SMA +29V is enabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: 1V
(0.5A) CURRENT/DIV: 0.5 April
(1ms) SWEEP RATE: 500 AASC

5.10.8.2.4 Photograph of transients induced on input bus current and SMA +29V output voltage as +29V is disabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: V. 5 A 1949
(1ms) SWEEP RATE: 500 44 Sec.

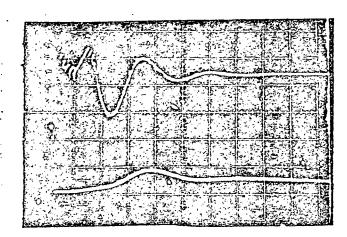
TS 16603 Rev B

18 December 1980

10.4 Performance test (continued)

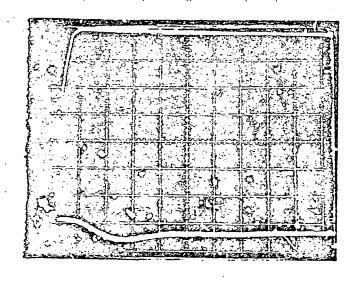
EF. PARA	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	MEASUE PRIMARY	EMENT REDUNDANT
5.10.8.3.1	Imput bus current	S26-1, S27-2 (S27-4 for RDT)		152.92mV	155.50
E 10 9 2 2	"The second of second		h		_

5.10.8.3.2 "Photograph of transients induced on input bus current and CDVU output voltage as CDVU is enabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: 1V (0.5A) CURRENT/DIV: 6.5 Augustians (1ms) SWEEP RATE: COONSE

voltage as CDVU is disabled - PRIMARY SIDE



(2V) 70LTAGE/DIV: //
(0.5V) CURRENT/DIV: 0.5 Aug.
(1ms) SWEEP RATE: 5000.

7.46

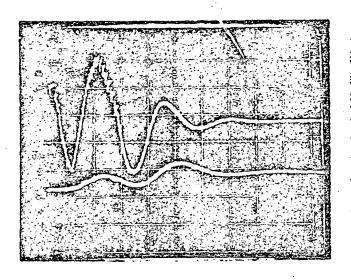
TS 16603 Rzv B 18 December 1980

#### 10.4 Performance test (continued)

EF. PARA

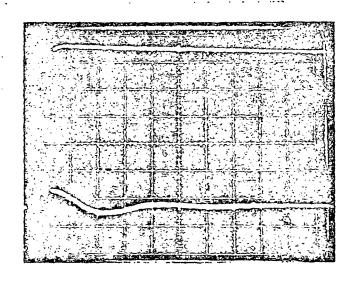
DESCRIPTION

5.10.8.3.2 Photograph of transients induced on input bus current and CDVU carput voltage as CDVU is enabled - REDUNDANT SIDE



(2V) VOLTACE/DIV: 11
(0.5A) CURRENT/DIV: 0.57

5.10.8.3.2 Photograph as transferts induced on input bus current and CDVU output voltage as CDVU is disabled - REDUNDANT SIDE



(2V) VOLTACE/DIV: 11
(0.5A) CURRENT/DIV: 0.5A

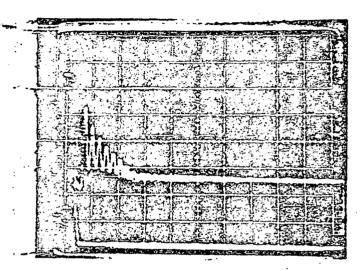
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

EF PARA

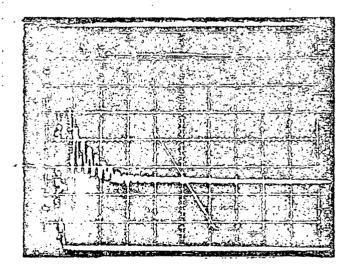
DESCRIPTION

5.10.9.1 Photograph of turn-off-transient of input bus voltage and input bus current as bus voltage is removed - PRIMARY SIDE



(59) VOLTAGE/DIV: SV (5A) CURRENT/DIV: SA. (500cs) SHEEP RATE: SDAASE

Photograph of turn-off transient of input bus voltage and input bus current as bus voltage is removed - REDUNDANT SIDE



(5V) VOLTACE/DIV: 5V (5A) CURRENT/DIV: 5A (5DOWS) SWEEP RATE: 5DOWS

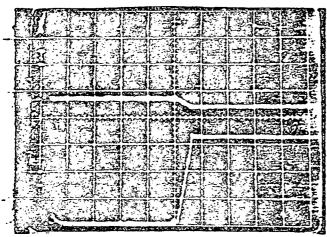
ris

TS 16603 Rev B 18 December 1980

#### 10.4 Performance test (continued)

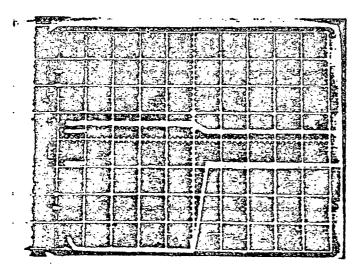
	•	DVH SWITCH		HEAST	TREMENT
REF PARA	DESCRIPTION	POSITIONS	LIMITS	PRIMARY	REDUNDANT
5.10.9.2	UUT stays off when bus is reapplied.	S1-ON (S2-ON for RDT)	••	1	

5.10.9.3 Photograph of turn-on transient of bus voltage and current as ON command is issued - PRIMARY SIDE



(5V) VOLTAGE/DIV: SV (5A) CURRENT/DIV: SACS (100ms) SHEEP RATE: 100ms

5.10.9.3 Photograph of turn-on transient of bus voltage and current as ON command is issued - REDUNDANT SIDE



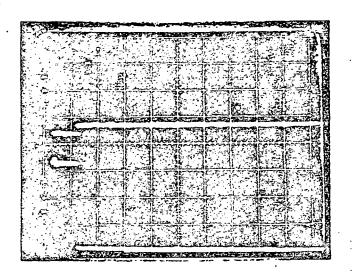
(5V) VOLTAGE/DIV: 5 (5A) CURRENT/DIV: 5 (100ms) SWEEP RATE: 100ms 50

TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

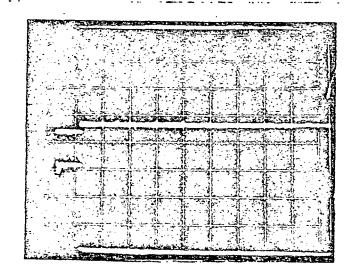
EF. PARA. DESCRIPTION

5.10.9.4 Photograph of turn-off transient of input bus voltage and current as OFF command is issued - PRIMARY SIDE



(5V) VOLTACE/DIV: CV (5A) CURRENT/DIV: A (10ms) SHEEP RATE: A

5.10.9.4 Photograph of turn-off transient of input bus voltage and custent as OFF command is issued - REDUNDANT SIDE



(5V) VOLTAGE/DIV: SV (5A) CURRENT/DIV: 50.5. (10ms) SWEEP RATE: 10.5.

ref. para.	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	PRIMARY REDUNDANT
5.10.9.5	- Racord	\$27 <b>-2</b> . (\$27 <b>-</b> 4)	-	155.91an 158.76
5.10.9.6	Record	(\$27 <b>-</b> 4 (\$27 <b>-</b> 2)		90.76 V 5.434.71
:	Record	\$27-2 (\$27-4)		· ·
		•	•••	57.94mV 151.48
5.10.9.7	Record that UUT turns on.	(Checkmark)	• • •	L L
5.10.10.1	Input bus current AFTER it reads ~ 17A AND input bus voltage reads ~ 21V.	S26-1, S27-2 (S27-4 for RDT)	151.00	5/50.58 15/39/
5.10.10.2	Input bus voltage with 17.0A load	326-1, S27-1 (S27-3 for RDT)		23.05V
5.10.10.3	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)	· · · · · · · · · · · · · · · · · · ·	4 <u>618</u> 1 45801
5.10.10.4	Imput current telemetry	\$26-4, \$28-2 (\$28-44-for RDT)	· <b>-</b> - ·	3582V 3.561V
		S26-1, S27-1 (S27-3 for RDT)		23.03V 23.03V
		S26-1, S27-2 (S27-4 for RDT)		122.23 AV 120 SLAV
5.10.10.5	Imput current telemetry output	S26-4, S28-2 (S28-4 for RDT)		3.049 × 2.994V
		\$26-1, \$27-1 (\$27-3 for RDT)	• ·	23.05 × 23.04 V
		~\$26-1, \$27-2 (\$27-4 for RDT)		102.72ml 103.12 ml
5.10.10.6	Imput current telemetry output	\$26-4, \$28-2 (\$28-4 for RDT)		2527 2.53V
		S26-1, S27-1 (S27-3 for RDT)		23.03V 25.03V
	Input bus current	S26-1, S27-2 (S27-4 for RDT)		68.81mV 92.16mV
5.10.10.7	Imput current telemetry output	S26-4, S28-2 (S28-4 for EDT)		2.087V 2028V
	Input bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)		23.05V 2299V
	Input bus current	\$26-1, \$27-2 (\$27-4 for RDT)		73.96V 76.64V

TS 16603 Rev B 18 December 1980

RET PARA	DESCRIPTION	DVM SGITCH POSITIONS	LIMITS PRIMARY RETURDANT
5.10.10.8	Imput current telemetry	\$26-4, \$28-2 (\$28-4 for RDT)	1.5292V 15118V
	Imput bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)	23.02 V 23.04 V
	Imput bus current	\$26-1, \$27-2 (\$27-4 for RDT)	56.82mV 60.34mV
5.10.10.9	Input current telenatry output	\$26-4, \$28-2 (\$28-4 for RDT)	1.1053V 1.0653V
	Imput bus voltage	S25-1, S27-1 (S27-3 for RDT)	23.04V 23.02V
	Input bus current	\$26-1, \$27-2 (\$27-4 for RDT)	46.06ml, 47.44ml
5.10.10.10	imput current telemetry	S26-4, S28-2 (S28-4 for RDT)	0.46 V 0.5107V
	Imput bus voltage	\$26-1, \$27-1 (\$27-3 for HDT)	2300V 2304V
	· Imput bus current	\$26-1, \$27-2 (\$27-4 for RDT)	31.64mV 20.66mV
5.10.10.11	Cimput current telemetry	\$26-4, \$28-2 (\$28-4 for RDT)	0.2315V 75-84-V 0.2263V
,	Impur bus voltage	\$26-1, \$27-1 (527-3 for RDT)	8~23.02V 23.02V
•	Imput bus carrent	\$26-1, \$27-2 (\$27-4 for RDT)	17.740-42-50 21.59~V
5.10.10.12	Imput current telemetry output	\$26-4, \$28-2 (\$28-4 for RDT)	75.84mV 74.2kmV
	Input bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)	23.01 23.00 V
:	Imput bus current	\$26-1, \$27-2 (\$27-4 for RDT)	13.251~V 13.561~V
5.10.11.1	Band 1+ output voltage	\$26-1, \$27-5	23.121 23.271
5.10.11.2	Band 1- output voltage	S27-6	-23.21 -23.01
5.10.11.3	2+	S27-7	23.31 2287
5.10.11.4	2-	S27 <del>-8</del>	-23.32 -23.12
5.10.11.5	3+	S27-9	23.82 23.14
5.10.11.6	Ÿ 3- Ÿ	\$ \$27-10	-22.91 -22.94
5.10.11.7	Band 4+ output voltage	526-1, 527-11	27.76 23.18

	REF. PARA.	DESCRIPTION	POSITIONS LOS	IIIS TRIVARY DESIGNANT
	5.10.11.8	Band 4- output voltage	926-1, S27-12	-= 28.19 V -28.07
	5.10.11.9	5,7+	<b>826-2, 827-1</b>	-32.71 V 2291
	5.10.11.10	5,7-	827-2	-22.66 -22.32
	5.10.11.11	6+	<b>827-3</b>	22.55 22.66
	5.10.11.12	Bend 6-	<b>S27-4</b>	-22.82 -22.81
	5.10.11.13	SMA Htr +	S27-5	-24.41 -24.68
	5.10.11.14	Htr -	-\$27 <b>-6</b>	34.86 -24.38
	5.10.11.15	+70	S27-7	8.939 B/A
	5.10.11	+70	(S27-8 For RDT)	n/a 9 <u>021</u>
	5.10.11	+297	S27-9	3/.34 HA
	5.10.11	+29V	(S27-11 For RDT)	N/A 31.99
	5.10.11	9 -29V	S27-10	-32.05 N/A M
		SMA -29V	\$26-2, (\$27-12 for RDT)	MA =3/82
	5.10.11.18	Radiometer	\$26-3, \$27 <b>-</b> 2	7508V - 2646
	5.10.11.19	CDVU	S27-3	7.219 9.308
	5.10.11.20	Analog +	327-4	25.35 74.24
	5.10.11.21	Analog -	S27-5	23.62 -23.25
	5.10.11.22	Electromech.	\$27 <b>-</b> 6	- 10 <u>48 30.23</u>
	5.10.11.23	Outgas -	S27-7	101.07 7.13
	5.10.11.24	Parasitic 😽	\$27 <b>-</b> 9	30.92 I/A N
		Parasitic output voltage	S26-3, (S27-10 for RDT)	N/A 31.31 S
	5.10.11.25	Band 1+ TM output	S26-4, S28-5	4.216 - 4.250
	5.10.11.26	1-	S28-6	4.216 4.137
	5.10.11.27	2+	S28-7	4.239 4.163
	5.10.11.28	2-	S28-8	4.218 4.181
	5.10.11.29	3+	S28-9	4.323 4.209
	5.10.11.30	3-	S28-10	4.169 4.174
	5.10.11.31	, 4+	\$28-11	4.235 4.236
	5.10.11.32	4-	<b>826-4</b> , <b>828-12</b>	4.208 4.168
•	5.10.11.33	Band 5,7+ TM output	526-5, 828-1	4.146 4.165

TS 16603 Rev B

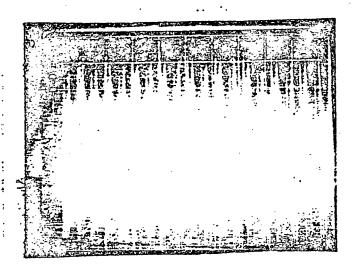
REP. PARA.	description_		Positi		LIMITS	HASU Primary	REPUBDANT
			006 5			4.118	4.131
5.10.11.34	Band 5,7- TH or	s <del>ch</del> or	<b>826-5</b> ,			7.U.O. 4.076	4.103
5.10.11.35	6+		.]	<b>628-3</b>			
5.10.11.36	Band 6-	•	. }	828-4		4.153	4.156
5.10.11.37	SMA Etr +		1	<b>528-5</b>	-	4.451	4.508
5.10.11.38	Htr -			S28-6		4.501	4.486
5.10.11.39	÷7V	. ·		S28-7 (S28-8- for RDT)		£ [08]	<u>5.53</u> 3
5.10.11.40	+29V			\$28-9 (\$28-11 for		4.329	4.388
5.10.11.41	SMA -29V			RDT) S28-10 for RDT)	4	4.068	4.05%
5.10.11.42	Rediometer		S26-6,	S28-2		5.152	5.228
5.10.11.43	CDVU		. 1	S28-3		5.106	5:154
5.10.11.44	Analog +			<b>328-4</b>	. 4	4.590	461
5.10.11.45	rAmalog -			;:S28-5	' _ s (	7.924	3. <u>960</u>
5.10.11.46	Elactromech.		. 🙀	S28-6	·	4.696	4.666
5.10.11.47	Outgas - TH ou	itput	S26-6,	S28-7	•	5.032	4.930
5.10.12.1	Bus voltage		S26-1. (S27-3		ā	23 <u>.62</u> V	23.02V
5.10.12.2	Input bus curre	ent .	826-1. (\$27-4			70.36 V	
5.10.12.3	SMATHET + cutpu	it voltege	::::\$26 <b>-</b> 2,	S27-5		21.62V	21.75
5.10.12.4	Htr +	ripple	Seen o	a Scope	≪30 aV pk-p		80
5.10.12.5	Atr -	-voltage	S26-2,	S27 <del>-6</del>		-22.12V	-2227V
5.10.12.6	SMA Htr -	ripple	Seen o	a Scope	≪630 EV pk-p	k <u>50</u>	<u>80</u> ,
5.10.12.7	CDVU	woltage	_\$26-3,	S27-3		7.550V	7496V
5.10.12.8	CDVU	ripple	Seen o	a Scope	<240 av pk-p		<u>80</u>
5.10.12.9	Outgas - outpu	it voltage	826-3,	<b>\$27-7</b>		86.66 V	
5.10.12.10	Outgas - outpu	it ripple	Seen o	n Scope	2.50V pk-pk	250mV	330-V
5.10.12.11	Parasitic outpu	it voltage	\$26-3, {\$27-10	927-9 for EDT)		30.36	3032 12 220
5.10.12.12	Parasitic outp	ut ripple	Seen o	a Scope	<900 mV pk-;	k DL	

TS 16603 Rev B 18 December 1980

#### ORIGINAL PAGE IS OF POOR QUALITY

10.4 Performance test (continued)

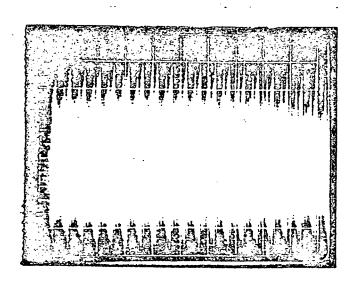
EF. PARA.	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	MEASU PRIMARY	REMENT REDUNDANT
EF. FARA,	DESCRIPTION	103111083	DILLIA	I KAIRAKI	TOLD OTTLEAT
5.10.13.1	Input current telemetry	S26-4, S28-2 (S28-4 for RDT)		1.3440V	13364
5.10.13.2	SMA Htr + output	\$26-5, \$28-5	•	3.950V	3.981V
5.10.13.3	SMA Htr -	\$26-5, \$28-6		4.011V	4.038V
5.10.13.4	CDVU	<b>S26-6, S28-3</b>		4.240V	4.319V
5.10.13.5	Outgas output telemetry	S26-6, S28-7	•	4.326V	43151
5.10.14.1	Photograph of reflected	input current rippi	e in outgas	mode - PRIMAR	Y SIDE



(2ma) CURRENT/DIV: 2mla.C.

(10us) SWEEP RATE: 10 ALEC.

5010.14.1 Photograph of reflected input current ripple in outgas mode - REDUNDANT SIDE



(2ma) CURRENT/DIV: 2mla.c.

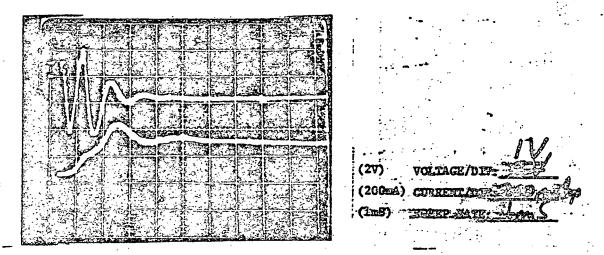
(10us) SWEEP RATE: 10ASEC.

TS 16603 Rev B 18 December 1980

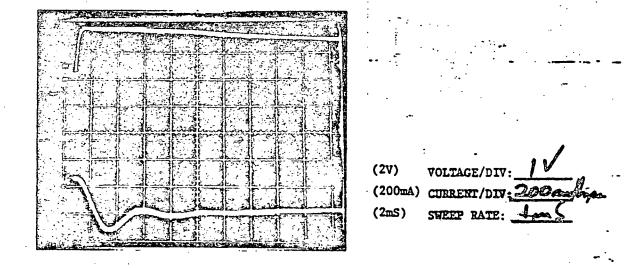
#### 10.4 Performance test (continued)

		DVM SWITCH		MEAST	REMENT
REF. PARA.	DESCRIPTION	POSITIONS	LIMITS	PRIMARY	REDUNDANT
5.10.15.1.1	Input current with CDVU off.	S26-1, S27-2 (S27-4 for RDT)		47.48	1424

5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU-load is enabled - PRIMARY SIDE

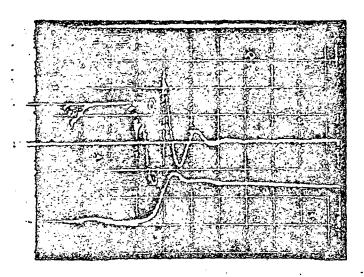


5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is disabled - PRIMARY SIDE



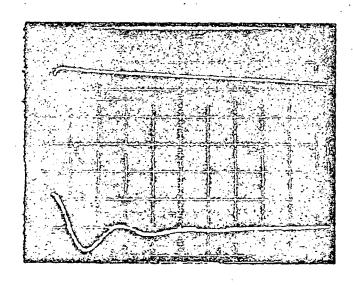
EF. PARA. DESCRIPTION

5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is enabled — REDUNDANT SIDE



(200ma) CURRENT/DIV: 260 mm/s.
(1ms) SWEEP RATE: 1 cm Sec.

5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is disabled - REDUNDANT SIDE



(200mA) CURRENT/DIV: 200mA.

(2ms) SWEEP RATE: Am Sec.

TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

DVM SWITCH
REF. PARA. DESCRIPTION

POSITIONS

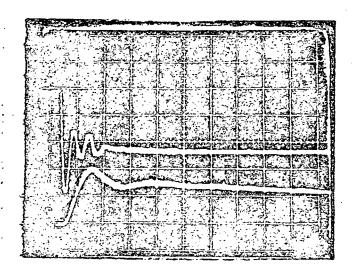
LIMITS

PRIMARY REDUNDANT

5.10.15.2.1 Input bus current with S26-1, S27-2
outgas disabled

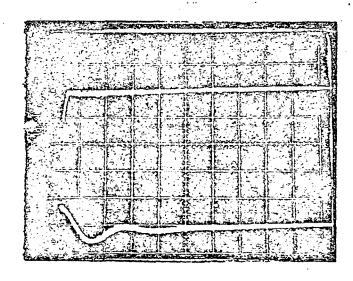
(S27-4 for RDT)

5.10.15.2.2 Photograph of input bus current and outgas voltage as outgas load is enabled - PRIMARY SIDE



(5V) VOLTAGE/DIV: 5V
(2A) CURRENT/DIV: 2A
(1mS) SWEEP RATE: 10-5

5.10.15.2.2 Photograph of input bus current and outgas voltage as outgas load is disabled - PRIMARY SIDE



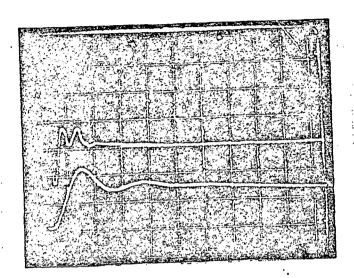
(5V) VOLTAGE/DIV: 5V
(2A) CURRENT/DIV: 2A
(2ms) SWEEP RATE: 5

TS 16603 Rev B 18 December 1980

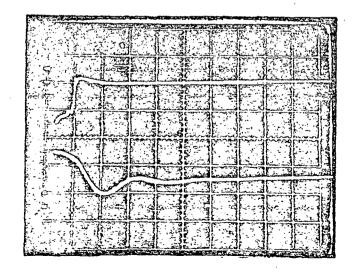
10.4 Performance test (continued)

DESCRIPTION FF. PARA

5.10.15.2.2 Photograph of input bus current and outgas voltage as outgas load is enabled - REDUNDANT SIDE



5.10.15.2.2 Photograph of input bus current and outgas voltage as outgas load is disabled - REDUNDANT SIDE



(57) (2A)

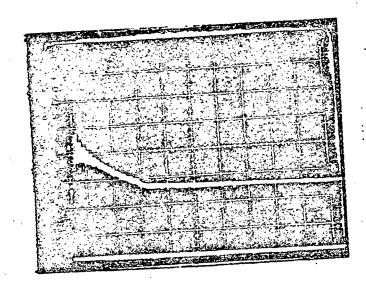
SWEEP RATE: 100 56 (lmS)

		DVM SHITCH		MEASUREY PT
REP. PARA.	DESCRIPTION	POSITION	LDUS	PRIMARY REDUNDANT
5.10.15.1	RPS voltage	\$26-1, \$27-1 (\$27-3 for EDT)		23.07V(49) 25.04
5.10.16.2	RPS current	\$26-1, \$27-2 (\$27-4 for EDT)	•	20.31~V(50) 20.93~V
5.10.16.3	SMA Htr +output voltage	\$26-2, \$27-5	•	1 <u>54</u> 1/ <sub>(13)</sub> <u>21.81</u> 1
5.10.16.4	SMA Etr +load current	S26-8, S34-1		146.64 (13) 47.03
5.10.16.5	SMA Htr -output voltage	S26-2, S27-6		- 22.0/V (4) - 22.23V
5.10.16.6	SMA Etr -load current	S26-8, S34-2		-8.690V,09-8.776V
5.10.16.7	CVU output voltage	S26-3, S27-3		7.546V (20) 7.688V
5.10.16.8	COVU load current	S26-8, S34-10		269. Feet (4:) 274.8 my
5.10.16.9	Parasitic output voltage	\$26-3, \$27-9 (\$27-	10)	30. <u>56V</u> (21) 30.86V
5.10.16.10	Parasitic load current	\$26-8, \$34 <del>-</del> 7		14241 (46) 143.82
5.10.16.11	Input power (5.10.16.1 x 5.10.16.2)	•		44. <del>355</del> ,43.223
•	Output power ((5.10.16.3 x 5.10.16.4) + (5.10.16.5 x 5.10.16.6) + (5.10.15.7 x 5.10.16.8) + (5.10.16.9 x 5.10.16.16			17.106 17.512
5.10.16.13	Efficiency ((5.10.16.12) ÷ (5.10.16.11)) x 100Z			36.5% 36.3%

EMP HTS+= 3 019 SMP HTS+= 1191 CBWU= 4 07 PARASITIC= 10 826 INPUT POMER= 46.855 CUTPUT POMEP= 17.106 EFFICIENCY= 36.5 %

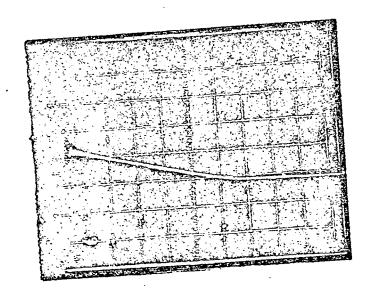
EMP WTR+= 2 05: SMB HTR+= 195 CBUU= 4.225 PAFASITIC= 11 04: INPUT POWEF= 48 223 CUTFUT POWEF= 17 512 EFFICIENCY= 36.3 %

5.10.17.1 Photograph of input bus current and input bus voltage as is disable - PRIMARY SIDE



(5V) VOLTAGE/DIV: 5V
(2A) CUBRENT/DIV: 24 AMERICAN
(12G) SWEEP RATE: 1605

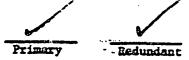
5.10.17.1 Photograph of imput bus current and imput bus voltage as is disabled - REDUNDANT SIDE



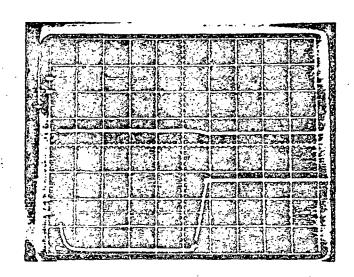
TS 16603 Rev B 18 December1980

10.4 Performance test (continued)

5.10.17.2 Unit stays off (check)

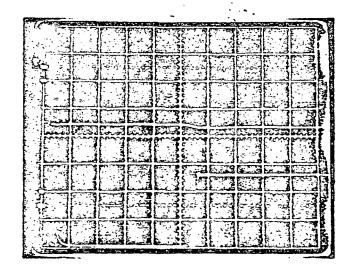


5.10.17.3 Photograph of input bus current and input bus voltage as is enabled - PRIMARY SIDE



(20) DOLLAR DEV. S. (100ms) SPEEP RATE: 700ms

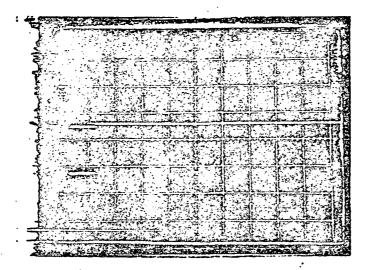
5.10.17.3 Photograph of input bus current and input bus voltage as as is enabled - REDUNDANT SIDE



(2V) VOLIACE/DIV: 5V (2A) CURRENT/DIV: 2A (100-5) SHEEP RATE: 104-5

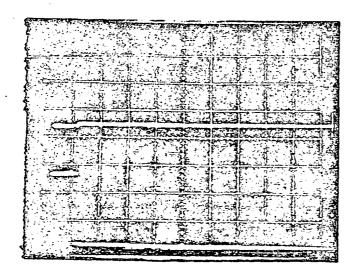
10.4 Performance test (continued)

5.10.17.4 Photograph of input bus current and input bus voltage as is disabled - PRIMARY SIDE



(2V) VOLTACE/DIV: SV (2A) CURPENT/DIV: 2A (10ms) SWEEP RATE: Dom ST

5.10.17.4 Photograph of input bus current and input bus voltage as is disabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: 5 (2A) CURRENT/DIV: 2A (10ms) SWEEP RATE: Des EC

TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

PARA DESCRIPTION POSITIONS

LIMITS

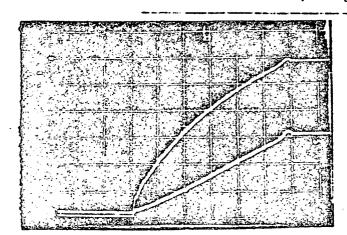
MEASUREMENT
PRIMARY REDUNDANT

5.10.17.5 Record that UUT operates correctly.

(checkmark)

1

5.10.18.1 Photograph of input bus current and MUX output voltage as MUX enable command is issued (all loads are ON except outgas) — PRIMARY SIDE

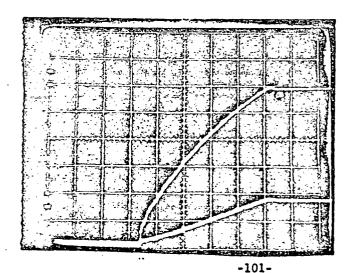


(5V) VOLTAGE/DIV: 5V

(5A) CURRENT/DIV: 5A

(20ms) SWEEP RATE: 10ms

5.10.18.2 Photograph of input bus current and parasitic output voltage as parasitic enable command is issued (all loads are ON except outgas) — PRIMARY SIDE

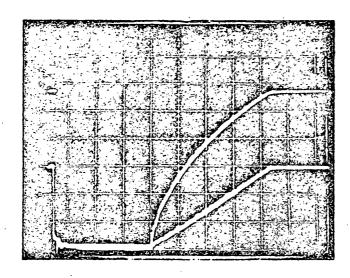


(5V) VOLTAGE/DIV: 5V
(5A) CURRENT/DIV: 5A

(20ms) SWEEP RATE: Dom SEC

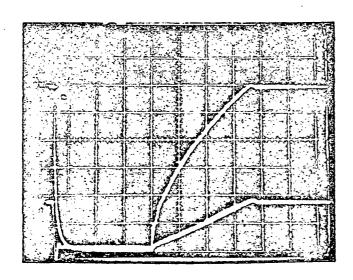
rich

.10.18.1 Photograph of input bus current and MUX output voltage as MUX enable command is issued (all loads are ON except outgas) — REDUNDANT SIDE



(5V) VOLTAGE/DIV: 5V (5A) .CURRENT/DIV: 5A (20ms) Sweep Rate: 1000 Sec

5.10.18.2 Photograph of input bus current and MUX output voltage as parasitic enable command is issued (all loads are ON except outgas) - REDUNDANT SIDE



(5v) Volts/Div: 5V (5A) Current/Div: 5Acces... (20mS) Sweep Rate: Profes

TS 16603 Rev B 96 Total 2000 BCG-T2 B-6-E/

#### · 10.4. Performence test (continued)

REF. TAPA.	DESCRIPTION	TROSITIONS	LEEDS	PRIMARY RET	HT DUNDANT
5.10.18.4	Undervoltage Trip Point (OH/OFF)	826-1, 827-1 (827-3 for RDT)	18.0 <u>2</u> 1.507	18,016 18	2.042
5.10.18.5	UUI stays OFF		•	Best	
5.10.18.6	Undervoltage Trip Point (OFF/ON)	\$26-1, \$27-1 (\$27-3 for RDT)	19.0 ±1.50V	* Characteristation * E	3.89
5.10.18.7	Overvoltage Trip Point	\$26-1, \$27-1 (\$27-3 for RDT)	38.0 ± 2∀	38.50√38	3.85 SCN
5.10.18.8	UUT etays OFF	•		<u> </u>	
5.10.18.9	UUI turns ON			4	V

2/4/82

ELLARS PRENSON

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TS 16603 Rev B 18 December 1980

PROTOFLIGHT IN-PROCESS_	N/A QUAL _/	V/A	OR ACCEPTANCE	_TEMPERATUR	
TESTING PHA	SE FINAL AMB.	IENT LI	NE VOLTAGE:	28	_ VOLIS
		DVM SWITCH			REMENT
REF. PARA.	DESCRIPTION	POSITIONS	LIMITS 41. %	PRIMARY	REDUNDANZ
5.10.1.1	Calibrate cmd gen	, ••	<del>-</del>		· V
5.10.2.1	Input bus current	S26-1, S27-2 (S27-4 for redundant)		0.1 <u>18 a V.</u>	0.228 N.
5.10.2.2	MUX cutput voltage	S26-3, S27-1	30.0 ±0.90V	29.67V.	2283 V.
5.10.2.3	MUX load current	S26-3, S27-12	3.55 ±0.40A	3 <u>1. 9 4 m l.</u>	32.12 -1.
The rest of	Section 5.10.2 require	es only checking	voltage - in	dicate by ch	eckmarks.
•	•				. / .
5.10.2.4.1	31 + output voltage	S26-1, S27-5			<b>→</b>
5.10.2.4.2	B1 -	\$27-6	· · ·		
5.10.2.4.3	B1 -	\$27 <b>-</b> 5			<b>1</b>
5.10.2.4.4	B1 +	\$27-7	<b>*</b>		
5.10.2.5.1	B2 +	\$27-7		_/_	
5.10.2.5.2	B2 -	\$27 <del>-</del> 8			1/
5.10.2.5.3	32 -	s27 <b>-</b> 8		<u> </u>	4
5.10.2.5.4	B2 +	\$27-7	•		<del></del>
5.10.2.6.1	B3 +	\$27 <del></del> 9			· <del>-/-</del>
5.10.2.6.2	B3 -	S27-10		<del>_//</del>	
5.10.2.6.3	B3 -	S27-10		/_	_/
5.10.2.6.4	B3 +	S27-9			<del>-/</del>
5.10.2.7.1	34 +	S27-11		<del>-//</del>	
5.10.2.7.2	B4 -	S27-12	•		-
5.10.2.7.3	В4 -	\$ \$27-12			· <u>-//</u> ·-
5.10.2.7.4	B4 +	S26-1, S27-11		<u>/</u> _	<del>-/-</del>
5.10.2.8.1	B5,7+	\$26-2, \$27-1		<del>/-</del>	
5.10.2.8.2	B5,7-	<b>\$27-2</b>		<del>/-</del>	<u> </u>
5.10.2.8.3	BS,7-	S27-2		<del>-//</del> .	<del>v</del> /
5.10.2.8.4	B5,7+	S27-1		<u>v/</u>	<del>/-</del>
5.10.2.9.1	B6 +	S27-3			· <del>/</del>
5.10.2.9.2	B6 - output voltage	\$26-2, \$27 <b>-</b> 4			

<b>,</b>	PIT FARA.	DESCRIPTION .	DVH SWITCH POSITIONS	1MTS	AUSAM R Vermen	
	5,20.2.9.3	B6 - output voltage	526-2, 527-4			<b>√</b>
	5.10.2.9.4	96 + putput voltage	\$26-2, \$27 <b>-3</b>		<del>\frac{1}{\frac{1}{2}}</del>	7
	5.10.2.10.1	SMA EIR + output voltage	S27-5		<b>—</b>	7
	5.10.2.10.2	1 • 1	S27-6		<b>ブ</b>	
	5.10.1.10.3		s27-6	•	<u> </u>	7
	5.13.1.13	-	<b>♥</b> 527-5		<u> </u>	
	3.10.1.11.1	-77	525-2, 527-7			,
	3		(227-8 for RDT)		/	<u> </u>
	5.:3.2.22.:	-197	526-2,·\$27- <del>9</del>			1
			(527-11 for RDT)		/	
	5.13.2.12.2	-297	\$26-2, \$27-10			1
			(\$27-12 for RDI)		,	<u> </u>
	5,10.1.12.3	-29V	\$25-2, \$27-10			
	£.::.2.: <u>1</u>	2RY ETS -384	\$26-2, \$27 <b>-9</b>			<del></del>
	1.12.2.13.1	Radiopeter	\$26-3 <sub>1</sub> . 527 <b>-2</b>		<del>/</del> _	<del></del>
,	5.12.2.23.2	Racioneter	527-2			-
	3.10.2.14.1		\$27-3		<del></del>	
	3.10.2.14.2		\$27-3			<del>-/-</del>
	5.10.2.15.1	Amalog +	\$27-4			<u> </u>
	5.10.1.15.1	Amalog -	527-5			<del></del>
	5.10.2.15.3	Azalog	\$27-5			<del>-/-</del>
	5.10.2.15.4	Analog +	\$27-4	• '	<del>_/</del> _	
	5.10,2.16.1	Electroneca.	\$27-6		<del></del>	<del></del>
	5.10.2.16.2	Electromech.	\$27-6		· <del>√</del>	
	5.10.2.17.1	Outgas output voltage	\$25-3, \$27 <b>-7</b>	-		
•	5.10.3.1	Bus voltage	\$25-1, \$27-1			. 28.01.1
			(527-3 for RDT)		28.0 V (A	9)21 0.
	5.10.3.2	MIX load current	526-3, \$27-12	4.130 <u>-</u> 0.92	EA 41.31 N.	4142-V.
	5.10.3.3	Bus current	S26-1, S27-2			151.73 d
•			(S27-4 for RDI)	ŀ	31.04.1 (50	)——"·
	5.10.3.3.2	BPS Voltage	526-1, 527-1 527-3)			28.01 V.
	5.10.3.3.3	BPS Current	\$26-1, \$27-2 (\$27-4)	į	30,94 V	131.64 a V.
	5.10.3.3.4	WAX Chilept	526-3, 527-12		41.29 ~ V	41.41 - 1 33
			-67-			268)

	•			•	•
DREF, PARA.	DESCRIPT	TION	DVM SWITCH POSITIONS	LIMITS	MEASUREMENT PRIMARY REDUNDAN
5.10.3.4.1	B1 + output	voltage	S26-1, S27-5	20.50 ±2.500	20.58 V.(1) 20.7/ V.
5.10.3.4.2	B1 + output	ripple	Look on Scope	≪000 mV pk-pk	30 N 25 N.
5.10.3.4.3	B1 - output	voltage	\$26-1, \$27-6	-20.50 ±2.50V	-20.97 V/21 -20.73 V.
5.10.3.4.4	Bl - output	ripple	Look on Scope	≪500 mV pk-pk	30 W 25 W
5.10.3.5.1	B2 + output	voltage	\$26-1, \$27-7	20.50 ±2.50V	20.93 V (3) 20.57 V.
5.10.3.5.2	B2 + output	ripple	Look on Scope	≪500 mV pk-pk	25 J 15 N.
5.10.3.5.3	52 - output	voltage	S26-1, S27-8	-20.50 <u>+</u> 2.50V	-2086 V 18) -2059 V.
5.10.3.5.4	B2 - output	ripple	Seen on Scope	<600 mV pk-pk	25 my 20 mk
5.10.3.6.1	33 + output	voltage	\$26-1, <b>\$27-9</b>	20.50 ±2:50V	20.51 V/5) 20.51 V.
5.10.3.6.2	B3 + output	ripple	Seen on Scope	<500_mV pk-pk	30 V 20 W.
5.10.3.6.3	B3 - output	voltage	S26-1, S27-10	-20.50 ±2.50V	-20.45 V 151-20.60 V.
5.10.3.6.4	B3 - output	ripple	Seen on Scope	<600 mV pk-pk	$\frac{25}{25} \sqrt{6} \frac{1350}{20} = 1.$
5.10.3.7.1	34 + output	voltage	S26-1, S27-11	20.50 ±2.50V	20.55 V (7) 20.7/V.
5.10.3.7.2	B4 + output	ripple	Seen on Scope	<500 mV pk-pk	25 W 15 ml
.10.3.7.3	B4 - cutput	voltage	S26-1, S27-12	-20.50 ±2.50V	
. c5.10.3.7.4	34 - output	ripple	Seen on Scope	<500 ≡V pk-pk	· 20.57 V (8) 20.73 V.
5.10.3.8.1	25,7 +	voltage	\$26-2, \$27-1	20.50 ±2.500	26.27 V (9) 20.20 V.
5.10.3.8.2	B5,7 +	ripple	Seen on Scope	∞00 mV pk-pk	30 July 35 July
5.10.3.8.3	B5,7 -	voltage	S26-3, S27-2	-20.50 ±2.50V	-2426 V (10) -2423 V.
5.10.3.8.4	B5,7 -	ripple	Seen on Scope .	<600 mV pk-pk	35 W 40 mb.
5.10.3.9.1	B6 +	voltage	S26-2, S27-3	20.50 ±2.50V	20.48 V (11) 20.55 V.
5.10.3.9.2	B6 +	ripple	Seen on Scope	≪500 mV pl -pk	25 d 15 28
5.10.3.9.3	36 -	voltage	\$26-2, \$27-4	-20.50 ±2.50∀	-20196 V (12) ·20.58 V.
5.10.3.9.4	36 -	ripple	Seen on Scope	≪600 mV pk-pk	30 mg 15 mg
5.10.3.10.1	SMA Htr +	voltage	S26-2, S27-5	21.20 <u>+</u> 2.12V	22.32 V (13) 2248 K
5.10.3.10.2	SMA Ror +	ripple	Seen on Scope	≪630 mV pk-pk	30 py 15 - w
5.10.3.10.3	SMA Rtr -	voltage	S26-2, S27-6	-21.20 ±2.12 V	22.79 V (14)-22.94 V
5.10.3.10.4	SMA Htr -	ripple	Seen on Scope	<630 mV pk-pk	30 W 20 W
5.10.3.11.1	SMA +7V		S26-2, S27-7 (S27-8 for RDT)	7.10 ±0.800	7.716 V (15) 2808 V.
5.10.3.11.2	SMA +7V out	put ripple	Seen on Scope	≪10 mV pk-pk	46 N 35 N

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	RET PARA	DESCRIPTION		POSTITIONS	LPOTS	Measurement Frimari redundan	T
	3.10.3.12.1	SHA +29V output	t voltage	\$26-2, \$27-9 (\$27-11 for EDT)	29.50 ±1.50V	30.48 (16) 30.68	·/
	5.10.3.12.2	SMA +29V	ripple	Sean on Scope	<b>₫70 aV, pk-p</b> !	2 50 N 50 m	V
	5.10.3.12.3	SMA -29V	voltage	\$25-2, \$27-10 (\$27-12 for KDT)	-29.50 <u>+</u> 1.50V	-30.47 (17)-30.69 V.	
	5.10.3.12.4	SHA -29V	ripple	Seen on Scope	<870 m√ pk-pk	50 N 40 N.	
	5.10.3.13.1	MUX	voltage	526-3, S27-1	30.00 ±0.907	30.244(18) 30.14 V.	
	5.10.3.13.2	AUX	ripple	Sean on Scope	<000 mV, pk-ph		
	5.10.3.14.1	Radiometer	voltage	S26-3, S27-2	8.50 ±0.857	8.581 V(19) 8.557 V.	
	5.10.3.14.2	Rediometer	ripple	Seen on Scope	√250 EV pk-pk	30 N.	
	5.10.3.15.1	CDVU	voltage	\$2 <del>6-3</del> , \$27-3	8.00 ±0.807	7.577 VE 20 7.718 V.	
	5.10.3.15.2	CDVU	ripple	Seen on Scope	√240 eV pk-pk	25 W 25 ml.	,
	5.10.3.16.1	Analog +	voltage	526-3, \$27-4	21.20 ±2.12V	22.好火倒22.53 1.	
	5.10.3.16.2	Analog +	ripple	Sees on Scope	≪30 mV pk-pk	30 ml	
	5.10.3.16.3	Analog -	voltage	S26-3, S27-5	-21.20 ±2.12V	12.51 VEST 2259 N	
ı	.0.3.16.4	Analog -	ripple	Seen on Scope	<630 ⊠V pk-pk	30 J 25 N	٠
	5.10.3.17.1	Electromech.	voltage	S26-3, S27-6	33.40 43.347	33.13 V (3) 33.40 V	
	5.10.3.17.2	Electromech.	ripple	Seen on Scope	Q.00 pk-pk	40 J 50 N	ſ.
	5,10.3.18.1	Outgas 🛡	Voltage	S26-3, S27-7	100.0 ±12.07	104.53 V 103.01 V.	
	5.10.3.18.2	Outgas output	ripple	Seen on Scope	<.07 pk-pk	150 N 150 N	
	5.10.4.1	Imput contest t	telemetry	\$26-4, \$28-2 (\$28-4 for RDT)		3.806 V 3.826 V.	
	5.10.4.2.1	Rand 1 + volt.	telestry	S26-4, 528-5		3.760 3.195	•
	5.70.4.2.2	Band 1 -		S28-6		3.750 3.775	
	5.10.4.3.1	Band 2+		S28-7	•	3.719 3.757	
٠.	5.10.4.3.2	Band 2-		S28-8		3.709 3.732	
	5.10.4.4.1	Band 3+		S28-9		3.753 1738	
	5.10.4.4.2	Bend 3-		\$28-10		2732 3.758	
	5.10.4.5.1	Bend 4+		S28-11		3.734 3.769	
	5.10.4.5.2	Bend 4-		526-4, <b>528-1</b> 2		3.744 3.774	٠,
	5.10.4.6.1	Bend 5,7+	7	\$26-5, \$28-1		3,700 3.708	
	5 10.4.6.2	Band 5,7- volt.	telemetry	\$26-5, <b>\$28-2</b>		3.695 3.688	
	•				•		

,	AET, PARA.	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	MEASUREMENT PRIMARY REDUNDANT
	5.10.4.7.1	Band 6 + volt. telestry	\$26-5, \$28-3		3.701 V. 3.726 V.
	5.10.4.7.2	Band 6 -	S28-4		3.737   3.760
	5.10.4.8.1	SMA Htt +	\$28-5		4.077 4.112
	5.10.4.8.2	SMA Etr -	\$28 <b>-6</b>		4132 4.158
	5.10.4.9	SMA +7V	\$26-5, \$27-7 (\$27-8 for RDT)	•	4.919 +.999
	5.10.4.10.1	SMA +29V	\$26-5, \$28-9 (\$27-11 for RDT)	•••	4.180 4.233
	5.10.4.10.2	SNA -29V	\$26-5, \$28-10 (\$27-12 for RDT)		3.781 3.857
	5.10.4.11	MIX	\$26-6, <b>\$28-1</b>		4.306 4.303
	5.10.4.12	Radiometer	\$26-6, \$28-2	• • • •	4.709 4.700
	5.10.4.13	כסעם	\$26-6, \$28-3	•	4.259 4,334
	5.10.4.14.1	Analog + volt. teletry	526-6, S28-4		4.014 4.031
	5.10.4.14.2	Analog -	\$26-5, \$28 <b>-</b> 5	. <b>.</b>	3.947 3.962
	.10.4.15	Electromech.	528-6		4.069 4.103
6	5.10.4.16	Outges volt. telemetry	S26-6, S28-7		5.230 × 5.154 ×
	5.10.5.1.1	Analog + load current	\$26-3, \$27-11 mV	10 = Amps /4	5.604 No 15.617 No
	5.10.5.1.2	127X	\$26-3, \$27-12 mV ÷	- 10 = Amps	41.29 al (20) 41.42 al.
	5.10.5.1.3	Band 1 +	S26-7, S34-1 EV ÷	0.5 = mA	91.58 av 60 92.17 av
	5.10.5.1,4	Band 1 -	S34-2		-91.75 (27) -92.39
	5.10.5.1.5	2 +	s34-3	•••	90,65 (20) 41.34
	5.10.5.1.6	2 -	S34-4		-91.49 (27) 92.12
	5.10.5.1.7	3 +	\$34-5		91.40 (00) 91.44
	5.10.5.1.8	3 -	s34-6		-9/21 (21) -9/.83
	5.10.5.1.9	4 +	S34-7		91.43 (12) 92.21
	5.10.5.1.10	4 -	S34-8		-9411 (22) -71.82
	5.10.5.1.11	5,7 +	S34-9		91,19 (17) 90.91
	5.10.5.1.12	5,7 -	s34-10		-90.36 (1.5) -90.221
	5.10.5.1.13	6 +	♥ S34-11	•	47.57 10 47.81
	5.10.5.1.14	Band 6 -	\$26-7, \$34 <b>-</b> 12		-47.40 (07) -+270-
	5.10.5.1.15	SMA Htr +	\$26-8, \$34-1 mV ÷	0.5 = mA	49.12 ps 48.45
	5.10.5.1.16	SMA Her - load current	S26-8, S34-2 mV =	mA	-9.005 V (9) -4.061 V

TS 16603 Rev B

# 10.4 Performance test (continued)

	BBC 6B T ****	DVH SWITCH		MEASUREMENT
REF. PARA.	DESCRIPTION	POSITIONS	LIMITS	PRIMARY REDUNDANI
5.10.5.1.17	SMA +29V load current	526-8, 534-3 m	7 ÷ 0.4C2 = mA	50.97 AV(40) 51.32 AV.
5.10.5.1.18	SMA -29V	534-4 128	7 ÷ 0.402 = EA	-50,73 (4)-5410 al.
5.10.5.1.19	SMA +7V	534-5	7 ÷ 0.1 = Amps	.2748 V. (44).284 BV
5.10.5.1.20	Analog -	534-6 -201	7 ÷ 0.402 - @A	-2700 Very: 2710 V.
5.10.5.1.21	Radiometer	\$34 <b>-</b> 9 %	7 ÷ 0.5 ≠ 12A	153.66~V. (40)153.85 ml
5.10.5.1.22	CDVU	\$ 534-10 m	7 ÷ 0.5 = mA	.2710 V. 65,2760 V.
5.10.5.1.23	Electromech. load current	S26-8, S34-11 m	7 ÷ 0.402 = mA	.21094, (4)2127 V.
5.10.5.2.1	Bus power supply voltage	S26-1, S27-1 (S27-3 for RDT)		28.00 V. 67 29.01 V.
5.10.5.2.2	Bus input current	S26-1, S27-2 257 (S27-4 for RDT)	7 ÷ 10 = Amps	131.27 - K(48) 131.97 - 1
5.10.5.2.3	PIN (Section 5.10.5)	; ·		367.556 36769 1
5.10.5.2.4	PIN (Section 5.10.3)			367.024 368.975
5.10.5.2.5	P <sub>IN</sub> (avg)	,		367,29 369.312
5.10.5.2.9	Input current at current l	limit	26-1, 27-2 (26-1 27-4 Rd	154.6 mg. 172.0 mg.
	Input voltage at current	limit"	27-1 (27-3 H	se) 27.72 p. 27.61 &
	MUX voltage at current lin	mit	26-3, 27-1	30.28 V. 30.46 V.
	MUX current at current lin	pit	27-12	54.07 mx 50.38 mx
5.10.5.3.1	Pour			271.545 274579 5
5.10.5.3.2	Efficiency		> 70%	74.43 74.84

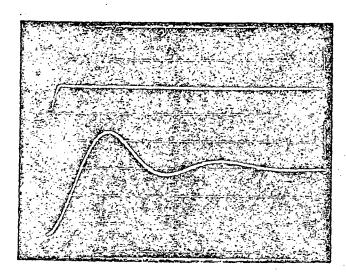
IMPUT ROWER #1= 747 554
10507 POWER #1= 767 024
HME IMPUT ROWER= 767 39
007807 POWER= 271 545
EFFICIENCY = 74 43
10507 POWER #2= 759 64797
10507 POWER #1= 759 57573
HME IMPUT POWER= 369 312
007507 POWER= 274 579
EFFICIENCY = 74 84

TS 16603 Rev B 18 December 1980

## 10.4 Performance test (continued)

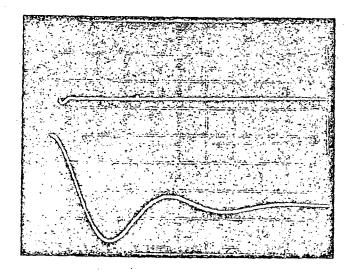
EF PARA	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	MEAS PRIMARY	UREMENT REDUNDANT
5.10.6.1	+7V output pulsed	\$26-2, \$27-7 (\$27-8 for RDT)	7.10 <u>+</u> 0.807	7.036 V.	7 <u>.185</u> v.

5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V output is being pulse-loaded-PRIMARY SIDE



(0.2A) CURRENT/DIV: 0.2 A-9/A, C.
(1V) VOLTAGE/DIV: 1 V/p.v.
(200us) SWEEP RATE: 500 506.

5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as pulse-load on SMA +7V outputs is being removed - PRIMARY SIDE



(0.2A) CURRENT/DIV: 0.2 A. A.C.
(1V) VOLTAGE/DIV: 1 V
(200us) SWEEP RATE: 500, 502.

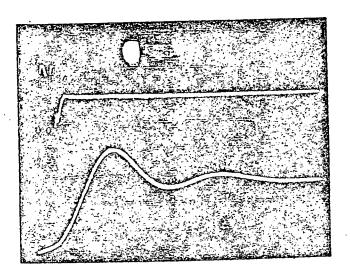
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

AEF. PARA

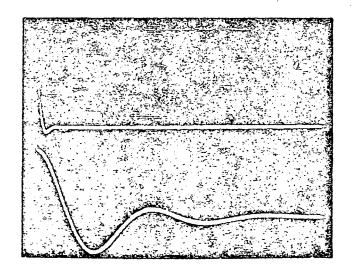
DESCRIPTION

5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V output is being pulse-loaded-REDUNDANT SIDE



(0.2A) CURRENT/DIV: A.C.
(1V) VOLTAGE/DIV: 1 V
(200us) SWEEP RATE: 5084866.

5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as pulse-load is being removed-REDUNDANT SIDE



(0.2A) CURRENT/DIV: 24 A.C.
(1V) VOLTAGE/DIV: 1V
(200us) SWEEP RATE: 500, sec.

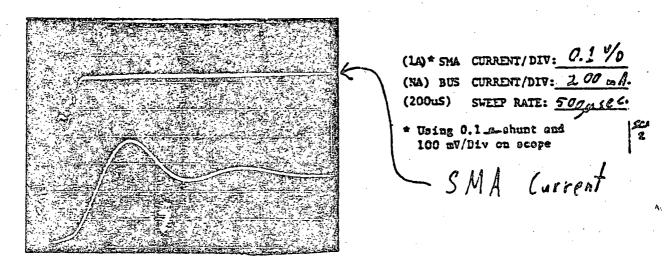
DAM

2734

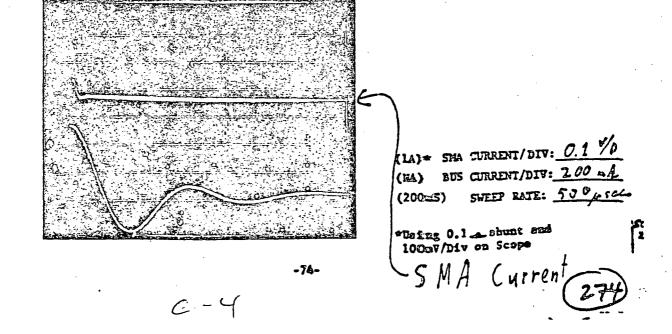
TS 16603 Rev B 90 Describes 1000 Sect-2 Res. 20

# 19.4 Performance test (continued)

ref, para,	DESCRIPTION	POSITIONS	LDATES	PRIMARY HEDURDANI
5.10.6.3	Input bus current	S26-1, S27-2 (S27-4 for EDT)		137.26 N. 144.45 V.
5.10.6.4	SMA +7V TM- pulsed	S26-5, S28-7 (S28-8 for RDT)		4.572 V. 4707 V.
5.10.6.5	SMA +7V load current- pulsed	(526-8, 534-5		4616 N. 4735 M.
5.10.6.6 current as	Photograph of transient SMA +7V output is being p	s induced on input bu ulse-loaded-PRIMARY S	es current and	d SMA +7V load



5.10.6.6 Photograph of transients induced on input bus current and SMA +7V load current as pulse-load is being removed-PRIMARY SIDE



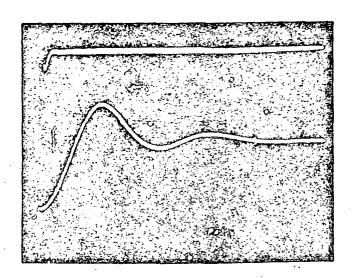
۵

REP. PARA

Έ.

DESCRIPTION

5.10.6.6 Photograph of transients induced on input bus current and SMA + 70 load current as SMA + 70 output is being pulse loaded - REDUNDANT SIDE



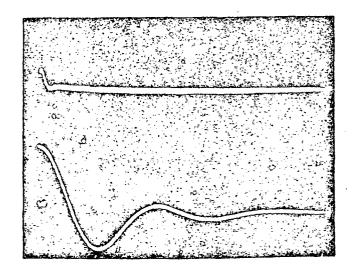
(1A)\* SMA CURRENT/DIV: 0.1 V

(2A) BUS CURRENT/DIV: 0.2 A

(200us) SWEEP RATE: 500 sec.

\*Using 0.1 cachunt and 100 mV/Div on scope.

5.10.6.6 Photograph of transients induced on input bus current and SMA + TV load current as pulse-load is removed - REDUNDANT SIDE



(1A) \* SMA CURRENT/DIV: 0.1 V

(2A) BUS CURRENT/DIV: 0.2 Å

(200ds) SHEEP RATE: 500 As SEC.

\*Veing 0.1 \_\_\_shunt end 100mV/Div on scope.

TS 16603 Rev B 18 December 108

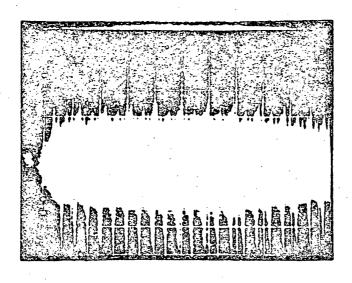
10.4 Performance test (continued)

EF: PARA.

DESCRIPTION

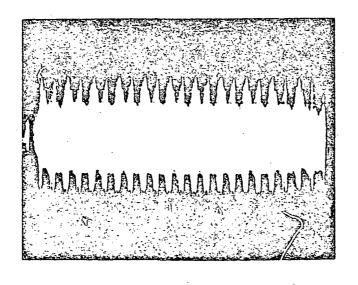
1.10.7.1

Photograph of reflected input current ripple - PRIMARY SIDE



(1ma) current/div: 24A. A.C.
(10us) sweep rate: 19asec.

5.10.7.1 Photograph of reflected input current ripple - REDUNDANT SIDE

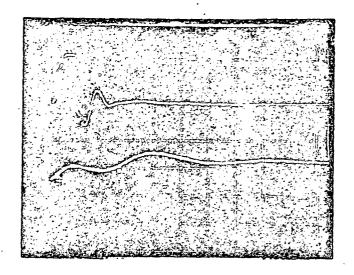


(1ma) CURRENT/DIV: 2 nd. a.c.
(10us) SWEEP RATE: 10mgcc.

131.68 mk ,35.81 mV-104.05 mV. 108.81 mV-

8.1.2 Input current w/o analog Same load

10.8.1.3 Photograph of transients induced on input bus current and analog + voltage as analog output is enabled - PRIMARY SIDE

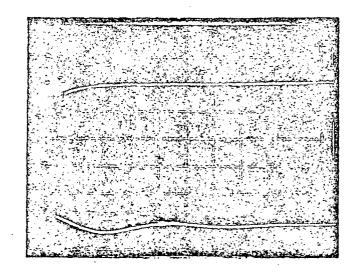


(2V) VOLTAGE/DIV: 2 V

(1A) CURRENT/DIV: 2 And.

(500us) SWEEP RATE: 500 a Sec.

5.10.8.1.3 Photograph of transients induced on input bus current and analog + voltage as analog output is disabled - PRIMARY SIDE



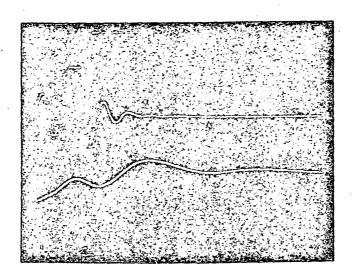
(5V) VOLTAGE/DIV: 2V
(1A) CURRENT/DIV: 2AAp.
(1ms) SWEEP RATE: 500, sec.

OF POOR QUALITY

RIT. PARA

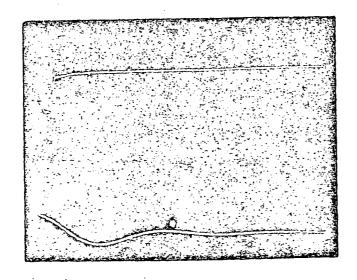
DESCRIPTION

5.10.8.1.3 Photograph of transients induced on imput bus current and analog + output voltage as analog output is enabled - REDURANT SIDE.



(2V) VOLPAGE/DIV: 2 V.
(1A) CHRENT/DIV: 2 Å.
(530-15) SHIP RATE: 50

5.10.5.1.3 Photograph of transients induced on imput bus current and analog - output voltage as analog output is disabled - MDUNAME SEE.

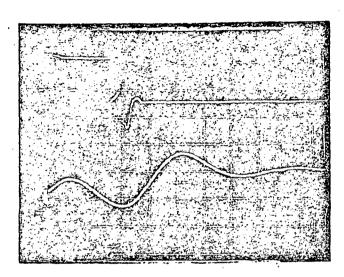


((3V) VOLIME/DIV: 2V ((1A) CURRENT/DIV: 2A ((1ES) SUEEP BAIX: 500<sub>04</sub>(6)

DVM SWITCE MPASUREMENT
OF PARA. DESCRIPTION POSITIONS LIMITS PRIMARY REDUNDANT

5.10.8.2.1 Input bus current w/o SMA S26-1, S27-2 +7V load (S27-4 for RDT) 120.22 1 124.20 1

5.10.8.2.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V is enabled - PRIMARY SIDE.

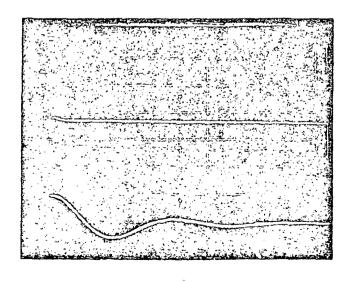


(5V) VOLTAGE/DIV: 2 V.

(1A) CURRENT/DIV: 1 Anp.

(200us) SWEEP RATE: 500/2586.

5.10.8.2.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V is disabled - PRIMARY SIDE.



(2V) VOLTAGE/DIV: 2 V.

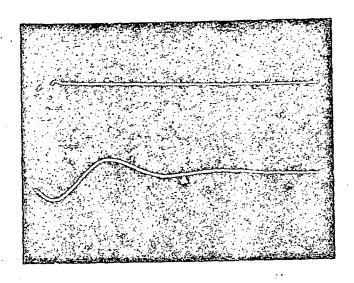
(1A) CURRENT/DIV: 1 A-p.

(2ms) SWEEP RATE: 500 M: CC.

REF. PARA

DESCRIPTION

..10.8.2.2 Photograph of transients induced on input bus current and SMA +7 output voltage as SMA +7V is enabled - REDUNDANT SIDE

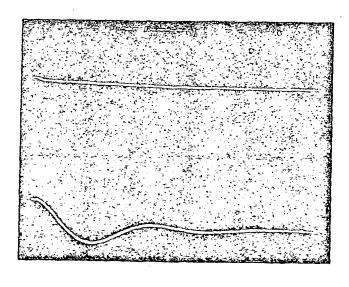


(5V) VOLTAGE/DIV: 2 U.

(1A) CURRENT/DIV: 1 Ang.

(200us) SWEEP RATE: 500 psec.

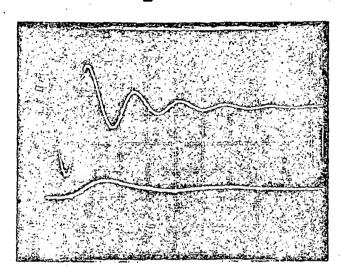
5.10.8.2.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V is disabled - REDUNDANT SIDE



- V) VOLTAGE/DIV: 2 U.

  A) CURRENT/DIV: 1 A a g.
- ms) SWEEP RATE: 500 psec.

EF, PARA	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	MEASUREMENT PRIMARY REDUNDAN
5.10.8.2.3	Input bus current 3/0 SMA +29V load	\$26-1, \$27-2 (\$27-4 for RDT)		127.70 av. 13207.
5.10.8.2.4	Photograph of transfents voltage as SNA ±29V is a			and SMA +29V output

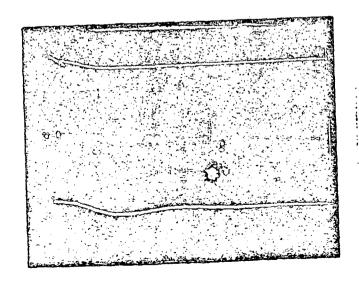


(2V) VOLTAGE/DIV: 10.

(0.5V) CURRENT/DIV: 0.5 Appl

(1ms) SWEEP RATE: 500 ps sec.

5.10.8.2.4 Photograph of transients induced on input bus current and SMA +29V output voltage as SMA +29V is disabled - PRIMARY SIDE

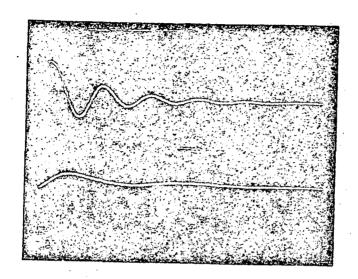


(2V) VOLTAGE/DIV: 1 V.
(0.5A) CURRENT/DIV: 0.5 Amps.
(1ms) SWEEP RATE: 5004591.

EF, PARA

DESCRIPTION

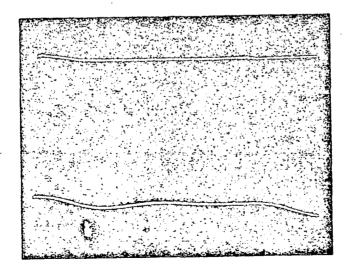
j.10.8.2.4 Photograph of transients induced on input bus current and SMA +29V output voltage as SMA +29V is enabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: 10.5A CURRENT/DIV: 0.5A.

(lms) SWEEP RATE: 500 psec.

5.10.8.2.4 Photograph of transients induced on input bus current and SMA +29V output voltage as +29V is disabled - REDUNDANT SIDE



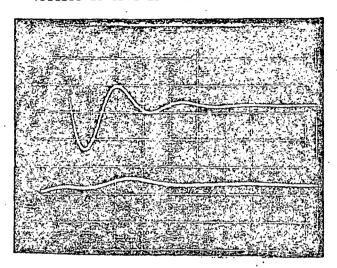
(2V) VOLTAGE/DIV: 1V.
(0.5) CURRENT/DIV: 0.5 Angl.
(1ms) SWEEP RATE: 500 sec.

Rev B
18 December 1980

# 10.4 Performance test (continued)

EF PARA	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	MEASUREMENT PRIMARY REDUNDAN
5.10.8.3.1	Input bus current	\$26-1, \$27-2 (\$27-4 for RDT)		129.48 N. 133.31 mV

5.10.8.3.2 Photograph of transients induced on input bus current and CDVU output voltage as CDVU is enabled - PRIMARY SIDE

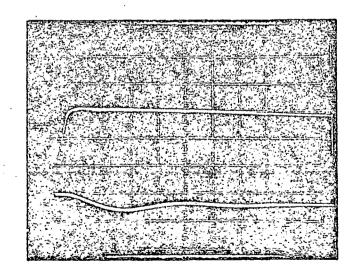


(2V) VOLTAGE/DIV: 1 V.

(0.5A) CURRENT/DIV: 0.5 App C.

(1ms) SWEEP RATE: 500 165 6 C.

5.10.8.3.2 Photograph of transients induced on input bus current and CDVU output voltage as CDVU is disabled • PRIMARY SIDE

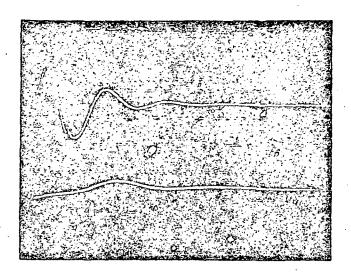


(2V) YOLTAGE/DIV: 1V (0.5V) CURRENT/DIV: 0.5 A = ps. (1ms) Sweep rate: 500 \(\text{p. sec.}\)

EF. PARA

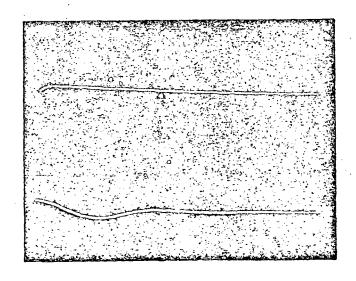
DESCRIPTION

5.10.8.3.2 Photograph of transients induced on input bus current and CDVU output voltage as CDVU is enabled - FEDURDANT SIDE



(2V) VOLTAGE/DIV: 1V.
(0.5A) CURRENT/DIV: 0.5 Apps
(1ms) SWEEP RATE: 500 as 800.

j.10.8.3.2 Photograph as transients induced on input bus current and CDVU output voltage as CDVU is disabled - REDUNDANT SIDE

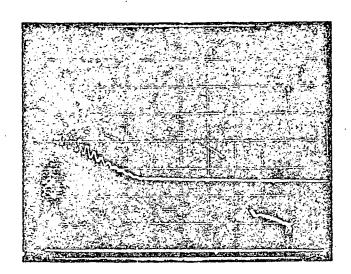


(2V) VOLTAGE/DIV: 10 (0.5A) CURRENT/DIV: 0.5 A = 15. (1ms) SWEEP RATE: 500 LSEC.

F. PARA

DESCRIPTION

5.10.9.1 Photograph of turn-off transient of input bus voltage and input bus current as bus voltage is removed - PRIMARY SIDE

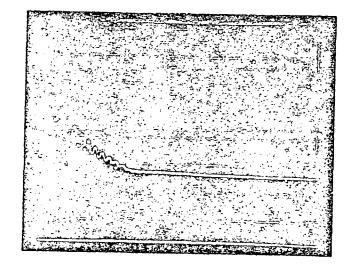


(5V) VOLTAGE/DIV: 5V

(5A) CURRENT/DIV: 5A

(500us) SWEEP RATE: 500 M SPC.

Photograph of turn-off transient of input bus voltage and input bus current as bus voltage is removed - REDUNDANT SIDE



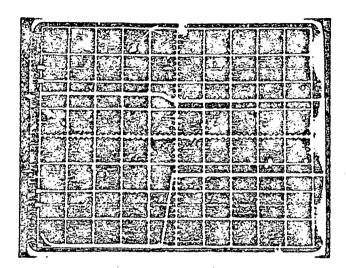
(5V) VOLTAGE/DIV: 5V
(5A) CURRENT/DIV: 5A
(500us) SWEEP RATE: 500µsec.

TS 16603 Rev E 18 December 1980

#### 10.4 Performance test (continued)

	•	DVM SWITCH		MEASUREMENT	
REF PARA	DESCRIPTION	POSITIONS	LIMITS	PRIMARY	REDUNDA'A
5.10.9.2	UUT stays off when bus is reapplied.	S1-ON (S2-ON for RDT)	<b></b>		

5.10.9.3 Photograph of turn-on transient of bus voltage and current as ON command

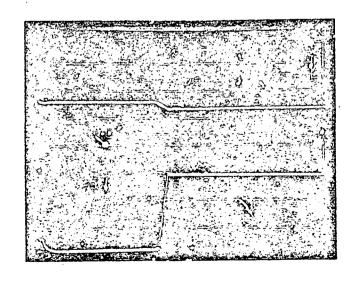


(5V) VOLTAGE/DIV: 5V.

(5A) CURRENT/DIV: 5 Am/S.

(100ms) SWEEP RATE: 100 asec.

5.10.9.3 Photograph of turn-on transient of bus voltage and current as ON command is issued - REDUNDANT SIDE



(5V) VOLTAGE/DIV: 5 V

(5A) CURRENT/DIV: 5 Anjs.

(100ms) SWEEP RATE: 100 LSEC

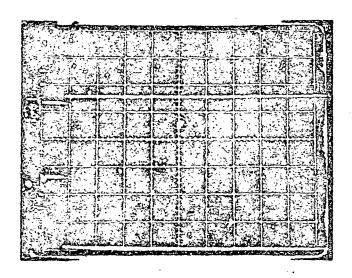
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

it.

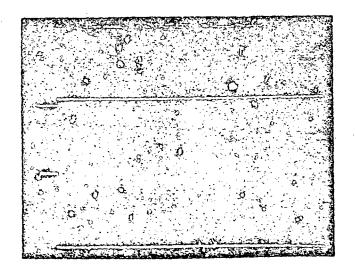
TF. PARA. DESCRIPTION

6.10.9.4 Photograph of turn-off transient of input bus voltage and current as OFF command is issued - PRDMRY SIDE



(5V) VOLTAGE/DIV: 5 V.
(5A) CURRENT/DIV: 5 Angs.
(10-5) SWEEP RATE: 10-5ec.

5.10.9.4 Photograph of turn-off transient of input bus voltage and current as OFF command is issued - REDUNDANT SIDE



(5V) VOLIAGE/DIV: 5V

(5A) CURRENT/DIV: 5 A PL

(10mS) SWEEP RATE: 10m sec.

TS 16603 Rev B 18 December 1980

## 10.4 Performance test (continued)

REF. PARA.	DESCRIPTION .	POSITIONS	LIMITS	PRIMARY	REDUNDANT
5.10.9.5	Record	527-2 (S27-4)	•	127.31 md	131.77 .1.
5.10.9.6	Record	(\$27-4 (\$27-2)		2-483 N.	
	Record	S27-2 (S27-4)			
		·	••	126.09 N	107.54
5.10.9.7	Record that UUT turns on.	(Checkmark)	•	V.	
5.10.10.1	Input bus current AFTER it reads ~ 17A AND input bus voltage reads ~ 21V.	S26-1, S27-2 (S27-4 for RDT)		15 <u>0.86 N</u> .	7
5.10.10.2	Input bus voltage with 17.0A load	S26-1, S27-1 (S27-3 for RDT)	. •	28.00	28.00 V.
5.10.10.3	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)	•	4:352 V	4.477
5.10.10.4	Input current telesetry output	526-4, 528-2 (S28-4 for RDT)	. •• .		3,5 <u>// 1.                                 </u>
	Input bus voltage	S26-1, S27-1 (S27-3 for RLT)	_	28.62 ₺	<del></del>
	Input bus current	S26-1, S27-2 (S27-4 for RDT)		124.47	<del></del>
5.10.10.5	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)		3. <u>018</u> V.	
	Input bus voltage	S26-1, S27-1 (S27-3 for RDT)	•	78.01 N	
	Input bus current	S26-1, S27-2 (S27-4 for RDT)		110.44 .V.	
5.10.10.6	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)		2. <u>503</u> V.	
	Input bus voltage	S26-1, S27-1 (S27-3 for RDT)		28.01 V	2 <u>8.02</u> V.
	Input bus current	\$26-1, \$27-2 (\$27-4 for RDT)		93.00 N	41 .70 ml.
5.10.10.7	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)		2. <u>014</u> V.	2.005 V.
	Input bus voltage	S26-1, S27-1 (S27-3 for RDT)		28.01 V.	
	Input bus current	\$26-1, \$27-2 (\$27-4 for RDT)		18.26 N.	74.50
		•	•		

RIF. PARA.	DESCRIPTION .	DVH STITES POSITIONS	LIMITS.	PROMERY BENTHAMI
5.10.10.8	Input current telemetry	526-4, 528-2 (526-4 for RDT)		1.5006 V. 1.5074 V.
	Imput bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)		28.04 V. 29.00 V.
	Input bus current	\$26-1, \$27-2 (\$27-4 for RDT)	·.	62.18 ml 58.80 ml
5.10.10.9	Imput current celementy output	\$26-4, \$28-2 (\$28-4 for EDT)		1.00 <u>64</u> V. 1.0020 V.
	Imput bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)		28.00 V. 28.00 V.
	. Imput bus current	\$26-1, \$27-2 (\$27-4 for RDT)		49.61 N. 31.86 ml
5.10.10.10	Imput current telenerry output	\$26-4, \$28-2 (\$28-4 for RDT)		.5049 V4999 V.
•	Impur bus voltage	526-1, S27-1 (S27-3 for NDT)		28.00 V.
	Imput bus currest	\$26-1, \$27-2 (\$27-4 for 3DT)		30.18 - 287 ml.
5.10.10.11	Input current telemetry output	\$25-4, \$28-2 (\$28-4 for RDI)		.2116 V2001 V.
	Imput bus voltage	526-1, S27-1 (S27-3 for RDI)		28.00 V. 21.9 V.
	laput bus curres:	\$26-1, \$27-2 (\$27-4 for RDI)		32.32 HV. 2074 N.
5.10.10.12	Input current telemetry output	\$26-4, \$28-2 (\$28-4 for RDT)		6.3 ml. 42.5 ml.
	Input bus voltage	\$25-1, \$27-1 (\$27-3 for RDT)		29.00 V. 21.00 V.
	laput bus current	\$26-1, \$27-2 (\$27-4 for RDT)		11.521 -1. 14.391 -1.
5.10.11.1	Band le output voltage	S26-1, S27-5		23.56 V. 24.25 V.
5.10.11.2	Band 1- output voltage	S27-6		-23.76 -23.73
5.10.11.3	2+	527-7		24.12 23.61
5.10.11.4	2-	\$27 <b>-</b> 8		-24.13 -2400
5.10.11.5	3+	S27-9		25.19 24.3
5.10.11.6	₹ 3-	\$ \$27-10	•	23.77 -25.78
5.10.11.7	Band 4+ output voltage	526-1, 527-11		2 9.04 V 2.4.16 V

RET PARA	DESCRIPTION	POSITIONS LIMITS	HEASUREMENT PEIMARY REDUNDAM
5.10.11.8	Eand 4- output voltage	526-1, 527-12	-23.70 V23.89 V.
5.10.11.9	5,7+	<b>\$26-2, \$27-1</b>	2320 25.63
5.10.11.10	5,7-	\$27-2	-23.14 -23.45
5.10.11.11	₩ 64	s27-3	22.88 28.32
5.10.11.12	Band 6-	<b>\$27-4</b>	-2118 -23:58
5.10.11.13	SMA Btr +	<b>527-5</b>	24.66 25:46
5.10.11.14	Btr -	· \$27-6	-25.24 -28642 1
5.10.11.15	+70	S27-7	9.178 V H/A
5.10.11	+7V	(S27-8 For RDT)	N/A 9.282 1.
5.10.11	+29V	s27 <i>-</i> 9	31.92 V. N/A
5.10.11	+29V	(\$27-11 For RDT)	M/V 3/42_A \$
5.10.11	₩ -29V	S27-10	-32.27 V. H/A 10
	SMA -29V	\$26-2, (\$27-12 for RDT)	M/A -3/17 V.
5.10.11.18	Radiometer	\$26-3, \$27-2	9.602 V. 9.721 V.
5.10.11.19	כסייט	S27-3	9.466 9.438
5.10.11.20	Analog +	\$27-4	26.64 26.85
5.10.11.21	Analog -	\$27-5	-25.94 3-25.20
5.10.11.22	Electromach.	527-6	41.70 41.60
5.10.11.23	Outgas	\$27-7	102.58 100.73
5.10.11.24	Paracitic 😽	\$27-9	30.94 V N/A N
	Parasitic output voltage	S26-3, (S27-10 for RDT)	N/4 31.17 V.3
5.10.11.25	Band 1+ TM output	<b>526-4</b> , <b>528-5</b>	4298 V. 4.434 V.
5.10.11.26	1-	\$28-6	4.310 4.315
5.10.11.27	2+	528-7	4.389 4.299
5.10.11.28	2-	\$28-8	4,368 4,356
5.10.11.29	3+	528-9	4617 2590
5.10.11.30	3-	S28-10	4.257 4.332
5.10.11.31	. 6+ .	\$ \$28-11	4363 4395
5.10.11.32	4 4-	526-4, 528-12	4,366 4,341
5.10.11.33	Band 5,7+ TH output	526-5, 528-1	4.219 4.3248

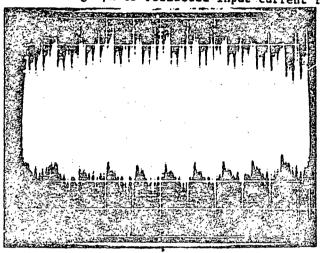
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	REF. PARA.	DESCRIPTION .	DVM SWITCH POSITIONS	LIMITS	PRIMARY	PARTITION I
•	5.10.11.34	Band 5,7- TM output	\$26-5, \$28-2		4.216 V.	4.270 V.
	5.10.11.35	6+	į 528-3		4.135	4.2201
	5.10.11.36	Band 6-	\$28-4		4,264	4.300
	5.10.11.37	SMA Btr +	528-5		4.500	4:699
	5.10.11.38	Btr -	S28-6		4.566	1 19 19 S
	5.10.11.39	+70	528-7		7/6/	
	٠.		(628-8 for		5.656	5.716
	5 10 11 40	+ 2011	RDT) 528-9	,	4:351	4.385
	5.10.11.40	+29V	(528-11 for		1. 2.2.	
		•	WIT)			- 000
	5.10.11.41	SMA -29V	S26-5, S28-10 (S28-12 for RDT)		3.920 V.	3 8 1 N'
	5.10.11.42	Radiometer	\$26-6, \$28-2		5.200 V.	5.268 V.
	5.10.11.43	CDVU	s28-3	٠	5.242	5.226
	5.10.11.44	Analog +	<b>\$28-4</b>		4.727	4-789
	5.10.11.45	Analog -	\$28-5		4.061	4.069
	5.10.11.46	Electromech.	\$ 528-6		5.096	5.085
,	5.10.11.47	Outgas - IN output	S26-6, S28-7		5.105	5.014
	5.10.12.1	Bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)		28.00	28.01
	5.10.12.2	Input bus current	526-1, 527-2 (527-4 for RDT)		42.53 aV.	45,38 AV.
	5.10.12.3	SMA Btr + output voltage	526-2, S27-S		3 T 28 N	21.80 V.
	5.10.12.4	Btr +   ripple	Seen on Scope	<530 ⊠V pk-pl	20 %	30 av.
	5.10.12.5	Rtr - voltage	\$26-2, \$27 <b>-6</b>		-2219 127	A 30 V.
	5.10.12.6	SMA Btr - ripple	Sees on Scope	≪30 mV pk-pl	50 40	30 ml.
	5.10.12.7	CDVU voltage	\$26-3, \$27 <b>-3</b>		7.550 WY,	7.701 L
	5.10.12.8	CDVU ripple	Seen on Scope	<b>240 m</b> pk-pi	60 41	30 m.
	5.10.12.9	Outgas - sutput voltage	S26-3, S27-7	•	86. <u>65 1.8</u>	4 P' 60 A'
	5.10.12.10	Outgas - sutput ripple	Seen on Scope	2.50V pk-pk	250 N.	250 N.
	5.10.12.11	Parasitic output voltage	\$26-3, \$27-9 (\$27-10 for RDT)		30.23 V.	30.34 x 3
	5.10.12.12	Parasitic output ripple	Seen on Scope	< 900 mV pk-pl	103 -V.	

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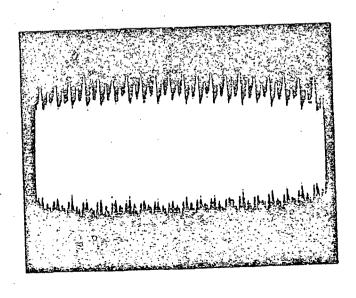
# 10.4 Performance test (continued)

EF. PARA.	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	HEAST PRIMARY	REMENT
5.10.13.1	Input current telemetry	S26-4, S28-2 (S28-4 for RDT)		1.0119 V.	12 072 V.
5.10.13.2	SMA Her + output	S26-5, S28-5		3.941 V	3.992 V.
5.10.13.3	SMA Htr -	\$26-5, \$28-6		4.014 V.	4.066 V.
5.10.13.4	CDVU	\$26-6, \$28 <b>-3</b>		4.242 V	44332 V.
5.10.13.5	Outgas output telemetry	\$26-6, S28-7		4.326 V	4.363 V
5.10.14.1	Photograph of reflected i	Indut current rinni	e in aussa	V.	***************************************



(2mA) CURRENT/DIV: 2 ... A.C.
(10uS) SWEEP RATE: 10 psec.

5.10.14.1 Photograph of reflected input current ripple in outgas mode - REDUNDANT SIDE



CURRENT/DIV: 2 -A. A.C.

SWEEP RATE: 10 µ Sec.

TS 16603 Rev B

18 December 1980

## 10.4 Performance test (continued)

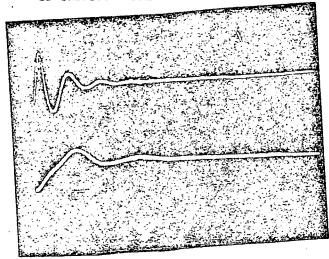
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	•	DVM SWITCH		MEASUREMENT
REF. PARA.	DESCRIPTION	POSITIONS	LIMITS	PRIMARY REDUNDANT
5.10.15.1.1	Input current with CDVU	\$26-1, \$27-2 (\$27-4 for RDT)		40.22 ml. 42.98 ml.

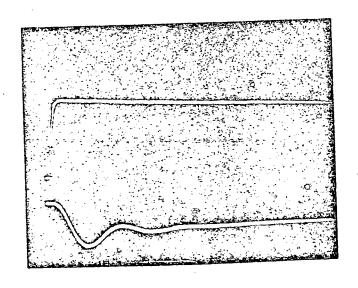
5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is enabled - PRIMARY SIDE



VOLTAGE/DIV: (200mA) CURRENT/DIV: 2 00 = Aap.

SWEEP RATE: 1956 (lmS)

\$5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is disabled - PRIMARY SIDE



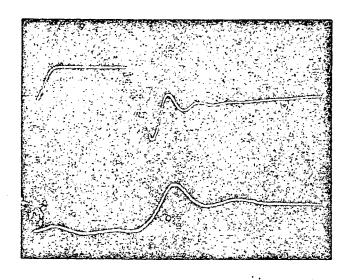
(2V) (200mA) CURRENT/DIV: 200 5.

TS 16603 Rev B 18 December 1980

#### 10.4 Performance test (continued)

DESCRIPTION 7. PARA.

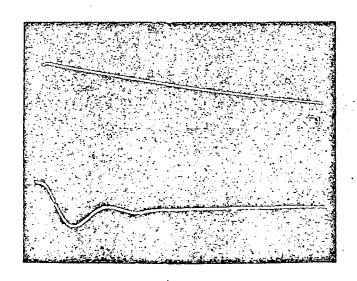
5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is enabled - REDUNDANT SIDE



VOLTAGE/DIV: ma) current/div: 200 A.

SWEEP RATE: 1 & SEC. 3)

5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is disabled - REDUNDANT SIDE



VOLTAGE/DIV: **(2V)** 

(200mA) CURRENT/DIV: 200 m A.

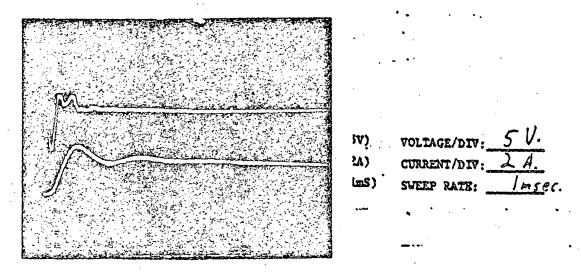
SWEEP RATE: / m sec (2mS)

TS 16603 Rev B 18 Decumber 1980

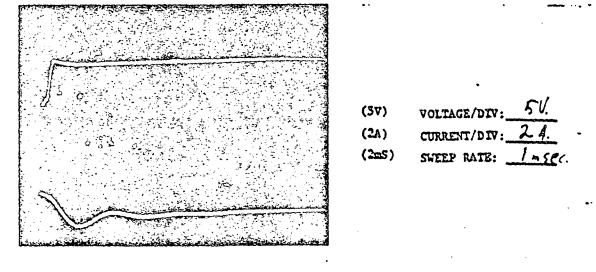
# 10.4 Performance lest (continued)

EF. PARA.	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	PRIMARY	REMENT REDUNDANT
5.10.15.2.1	Input bus current with outgas disabled	\$26-1, \$27-2 (\$27-4 for RDT7		14.770 ml.	

5.10.15.2.2 Photograph of input bus current and outges voltage as outges load is enabled - PRIMARY SIDE



5.10.15.2.2 Photograph of input bus current and outges voltage as outges load is disabled - PRIMARY SIDE

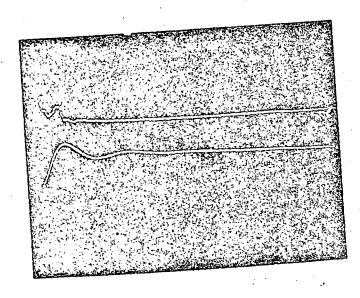


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# 10.4 Performance test (continued)

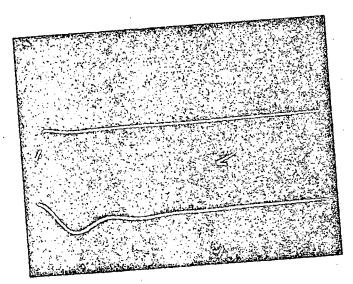
DESCRIPTION

p.10.15.2.2 Photograph of input bus current and outgas voltage as outges load is enabled - REDUNDANT SIDE



VOLTAGE/DIV: (5V) CURRENT/DIV: (2A) Imsec. (500uS) SWEEP RATE:

5.10.15.2.2 Photograph of input bus current and outgas voltage as outgas load is disabled - REDUNDANT SIDE



VOLTAGE/DIV: (5V) CURRENT/DIV: (2A) 100 506 SWEEP RATE: (ImS)

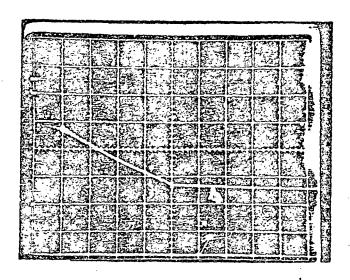
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	REF. PARA.	DESCRIPTION	DVM SWITCH POSITION LIMI	HEASUREMENT LTS PRIMARY REDUNDANT
1	5.10.16.1	BPS voltage	\$26-1, \$27-1 (\$27-3 for RDT)	28.00 V. (49) 28.00 y.
	5.10.16.2	BPS current	\$26-1, \$27-2 (\$27-4 for RDT)	17,578 ~ V (50) 20.49 V.
	5.10.16.3	SMA Htr +output voltage	526-2, S27-5	· 21.69 V(1) 21.53 V.
	5.10.16.4	SMA Htr +load current	S26-8, S34-1	46.772 V. (15) 41.08 V.
	5.10.16.5	SMA Htr -output voltage	S26-2, S27 <b>-</b> 6	-22.07 V(i4) -1130V.
	5.10.16.6	SMA Htr -load current	S26-8, S34-2	-8.716-V. (79) 291 =V.
-	5.10.16.7	₩VU output voltage	S26-3, S27-3	7.545 V (20) 7.697 V.
	5.10.16.8	COVU load current	S26-8, S34-10	.2 <u>696 V. (45) 2751 V.</u>
	5.10.16.9	Parasitic output voltage	526-3, 527-9 (S27-10)	30.64 V. (25) 30.83 V.
	5.10.16.10	Parasitic load current	S26-8, S34-7	142. 76 = V. (25) 43.7/4V.
	5.10.16.11	Input power (5.10.16.1 x 5.10.16.2)	, ·	49.218 57.372 xp2
4	5.10.16.12	Output power ((5.10.16.3 x 5.10.16.4) + (5.10.16.5 x 5.10.16.6 + (5.10.15.7 x 5.10.16.6 + (5.10.16.9 x 5.10.16.1		17.17 17.504
	5.10.16.13		MA HIR+= 3 029 MA HIR+= 3 029 MA HIRH= 193; C.U= 4 063 APASITIC= 20 391 MEDT FOMER= 49 218 UTPUT FOMER= 17 17 FFICIENCY= 74 9 N MA HIR+= 2 053 MA HIR+= 196 CUU= 4.275 APASITIC= 11 021 MEDT FOMER= 17 504 FFICIEUCY= 70 %	34 <u>9%</u> 305%

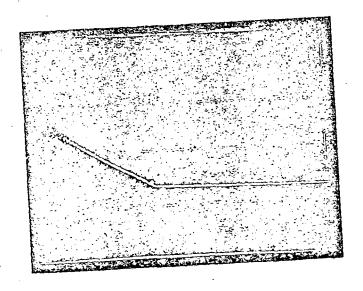
5.10.17.1 Photograph of input bus current and input bus voltage as is disable - PRIMARY SIDE



(5V) VOLTACE/DIV: 5V.
(2A) CURRENT/DIV: 2 Ange.

(1ms) SWEEP RATE: Imsec.

5.10.17.1 Photograph of input bus current and input bus voltage as is disabled - REDUNDANT SIDE



(5V) VOLTAGE/DIV: 5U.

(2A) CURRENT/DIV: 2 A = 45.

(1ms) SWEEP RATE: Imsec.

TS 16603 Rev B 18 December1980

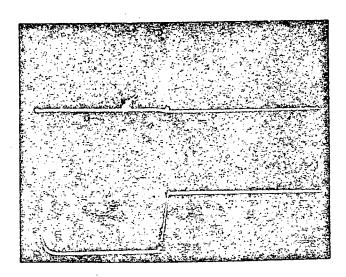
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10.4 Performance test (continued)

5.10.17.2 Unit stays off (check)

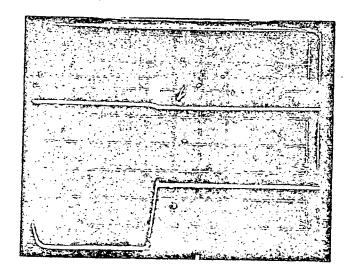
Primary Redundant

5.10.17.3 Photograph of input bus current and input bus voltage as is enabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: 5V (2A) CURRENT/DIV: 2A (100ms) SWEEP RATE: 100 a sec.

5.10.17.3 Photograph of input bus current and input bus voltage as as is enabled - REDUNDANT SIDE



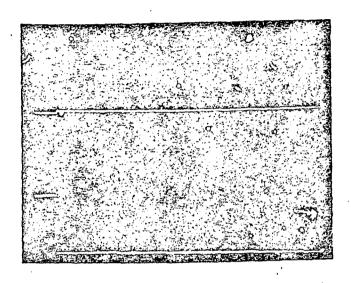
(2V) VOLTAGE/DIV: 5U.
(2A) CURRENT/DIV: 2A.
(100ms) SWEEP RATE: 100 ~ Sec.

TS 16603 Rev B 18 December 198

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10.4 Performance test (continued)

5.10.17.4 Photograph of input bus current and input bus voltage as is disabled - PRIMARY SIDE

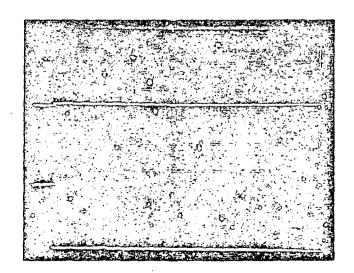


(2V) VOLTAGE/DIV: 5 V.

(2A) CURRENT/DIV: 2 A.

(10ms) SHEEP RATE: 16 m sec.

5.10.17.4 Photograph of input bus current and input bus voltage as is disabled - REDUNDANT SIDE



(2V) VOLTAGE/TIV: 5V

(2A) CURRENT/DIV: 1 A

(10mS) SWEEP RATE: 10 msec

Rev B

18 December 1980

Performance test (continued)

DESCRIPTION

DVM SWITCH POSITIONS

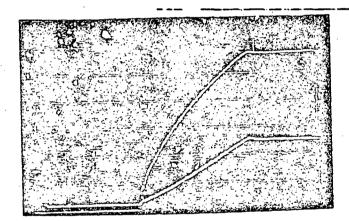
LIMITS

MEASUREMENT PRIMARY REDUNDANT

5.10.17.5 Record that UUT operates correctly.

(checkmark)

5.10.18.1 Photograph of input bus current and MUX output voltage as MUX enable command is issued (all loads are ON except outgas) — PRIMARY SIDE

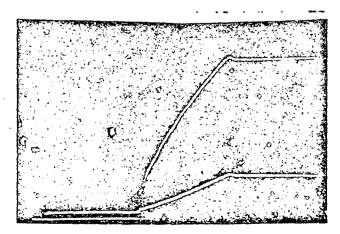


(5V) VOLTAGE/DIV: 5V.

(5A) CURRENT/DIV: 5A.

(20mS) SWEEP RATE: 10 = Sec

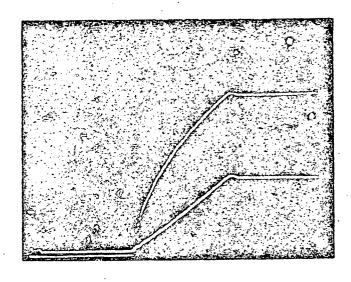
5.10.18.2 Photograph of input bus current and parasitic output voltage as parasitic enable comms d is issued (all loads are ON except outgas) - PRIMARY SIDE



(5V) VOLTAGE/DIV: 5U.
(5A) CURRENT/DIV: 5A

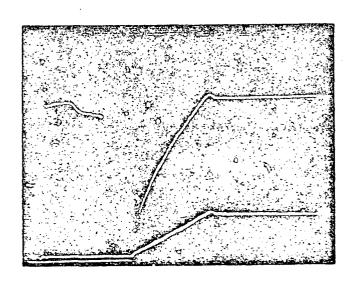
(20ms) SWEEP RATE: 10 - Sec.

p8.1 Photograph of input bus current and MUX cutput voltage as MUX enable command is issued (all loads are ON except outgas) - REDUNDANT SIDE



(5V) VOLTAGE/DIV: 5V
(5A) CURRENT/DIV: 5A
(20ms) SWEEP RATE: 10 m sec.

3.10.18.2 Photograph of input Lus current and MUX output voltage as parasitic enable command is issued (all loads are ON except outgas) — REDUNDANT SIDE



(5v) Volts/Div: 5 V.

(5A) Current/Div: 5 Amos.

(20ms) Sweep Rate: 10 a sec.

TS 16603 Rev 8

#### 10.4 Performance test (continued)

A. ZARA	DESCRIPTION ·	positions	LIMITS	PRASUE PROMARY	Marni Redundani
5.10.18.4	Undervoltage Trip Point (ON/OFF)	S25-1, S27-1 (S27-3 for RDT)	18.0 ±1.50V	18.07 V.	18.04 V.
5.10.18.5	UUI stays OFF		•		
5.10.18.6	Undervoltage Trip Point (OFF/ON)	\$26-1, \$27-1 (\$27-3 for EDT)	19.0 ±1.50V	18.9 V.	18.9 V.
5.10.18.7	Overvoltage Trip Point	\$26-1, \$27-1 (\$27-3 for RDT)	38.0 ± 2V	37.8 V.	38.8 E SCH
5.10.18.8	UUI stays OFF	•		<u> </u>	
5.10.18.9	UUI turns ON				

Feb. 5, 1982

DATE

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TESTER(5)

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166

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TS 16603 Rev B 18 December 1980

10.4	Performance test - Lon	g Form		
PROTOFLIGHT	N/A OR FLIGHT	· ·	s/m 014	TEMPERATURE: A MB
IN-PROCESS_	N/A QUAL	N/A	OR ACCEPTANCE	
TESTING PHAS		L	NE VOLTAGE:	35 volis
		DVM SWITCH		HEASUREMENT
REF. PARA.	DESCRIPTION	POSITIONS	LIMITS	PRIMARY REDUNDANT
5.10.1.1	Calibrate cmd gen	••		
5.10.2.1	Input bus current	S26-1, S27-2		0.212 11 227
	••	(S27-4 for redundant)		• • • · · · · · · · · · · · · · ·
5.10.2.2	MUX output voltage	S26-3, S27-1	30.0 ±0.90V	29.65 V. 30,40
5.10.2.3	MUX load current	S26-3, S27-12	3.55 ±0.40A	
The rest of	Section 5.10.2 require	e only checking	- r mitaga - in	dianta bu abaalmanka
		. our's checarne	yortage = im	dicate by checkmarks.
5.10.2.4.1	B1 + output voltage	S26-1, S27-5	·	
5.10.2.4.2	B1 -	S27-6		J
5.10.2.4.3	B1 -	S27-5		
5.10.2.4.4	B1 +	S27-7		J
5.10.2.5.1	B2 +	S27-7		
5.10.2.5.2	B2 -	S27-8		V) V
5.10.2.5.3	E2 -	S27-8		
5.10.2.5.4	B2 +	s27 <b>-</b> 7	·	
5.10.2.6.1	B3 +	\$27 <del></del> 9	•	
5.10.2.6.2	B3 -	S27-10		1
5.10.2.6.3	B3 -	S27-10		4
5.10.2.6.4	B3 +	\$27-9		4
5.10.2.7.1	B4 +	S27-11	·	1 1
5.10.2.7.2	B4 -	S27-12	•	4 ~
5.10.2.7.3	B4 -	\$ \$27-12		-
5.10.2.7.4	B4 +	\$26-1, \$27-11		1
5.10.2.8.1	B5,7 <del>+</del>	S26-2, S27-1		4
5.10.2.8.2	35,7-	S27-2		¥
5.10.2.8.3	B5,7-	S27-2		<del>-</del>
5.10.2.8.4	B5,7+	S27-1		4
5.10.2.9.1	B6 + .	\$27-3	• •	1 ~
5.10.2.9.2	B6 - output voltage	S26-2, S27-4		· 4
				(304)

.a 10003 Rev 3

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# 10.4 -Performance test (continued)

10.4	Sariormed test [continue	<u> </u>			
PET, PARA,	N. S. C. C. S. P. C. C. C. C. C. C. C. C. C. C. C. C. C.	DAN SALICH SOSTITIONS	LMIS	_	RESERVANT
5.10.2.9.3	B6 - surput voltage	526-2, 527-4		J,	L
5.10.2.9.4	S6 + sexpux voltage	S26-2, S27-3	•	<u></u>	
5.10.2.10.1	MA THE + output voltage	\$   \$27-5		<u> </u>	V
5.10.2.10.2	• 1 .	S27-6			
5.10.2.19.3	-	S27-6	•	<u></u>	V
5.10.2.10.4	•	<b>♥</b> 527-5		<u>J,</u>	1/
5.10.2.11.1	-77	525-2, 527-7			
5.19.2.11.2	-77	(\$27-8 for EDT)			~
5.10.2.12.1	+297	\$26-2, \$27 <del>-9</del>		<u> </u>	
		(\$27-11 for RDT)			1
5.10.2.12.2	-297	S26-2, S27-10		<b>1</b>	
		(\$27-12 for ADI)		,	1
5.10.2.12.3	~29♥	S26-2, S27-10			
5.10.2.12.4	SMA = R - 297	\$26- <del>2</del> , \$27-9		<u> </u>	
5.10.2.13.1	Radiometer	525-3, 527-2		<u> </u>	1/
5.10.2.13.2	Radiometer	527-2		<b>V</b> ,	1
5.10.2.14.1	<b>₩</b>	\$27-3		<u> </u>	1
5.10.2.14.2	`GDVU	s27-3		J,	1
5.10.2.15.1	Analog +	s27-4			~
5.10.2.15.2	Analog -	S27-5		<b>√</b>	u
5.10.2.15.3	Analog -	S27-5		<u> </u>	
5.10.2.15.4	Analog +	\$27-4			i
5.10:2.16.1	Mectroneci.	S27-6			
5.10.2.16.2	Electromech.	\$27-6		$\overline{\mathcal{J}}$	<u></u>
5.10.2.17.1	Outgas output voltage	\$26-3, \$27-7		<u> </u>	
5.10.3.1	Bus voltage	\$26-1, \$27-1		• -	•
	·	(S27-3 for RDT)		35.00	19135.00
5.10.3.2	MUX load current	\$26-3, \$27-12	4.130 =0.93	25A 41. 31 .V.	41.43
5.10.3.3	Sus current	S26-1, S27-2			
		(S27-4 for RDT)		105.51 \$	a) 107,79
5.10.3.3.2	BPS Voltage	\$26-1, \$27-1 \$27-3)		34.99 V.	
5.10.3.3.3	BPS Current	\$26-1, \$27-2 (\$27-4)		105.53 -V.	
5.10.3.3.4	MIX Current	526-3, 527-12		41.29.1	41.44
		-67-		4	305)

TS 16603 Rev B 18 December 1980

# 10.4 Performance test (continued)

REF, PARA,	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	MEASUREMENT PRIMARY REDUNDANT
5.10.3.4.1	B1 + output voltage	S26-1, S27-5	20.50 ±2.50v	20.53 4. (1) 20,79
5.10.3.4.2	B1 + output ripple	Look on Scope	≪600 mV pk-pk	20 1 20
5.10.3.4.3	B1 - output voltage	\$26-1, \$27 <del>-</del> 6	-20.50 ±2.50V	-20.54 V 12 20.81
5.10.3.4.4	Bl - output ripple	Look on Scope	≪600 mV pk-pk	20 20 20
5.10.3.5.1	B2 + output voltage	\$26-1, \$27 <b>-</b> 7	20.50 ±2.50V	20.34 1 (3) 20.62
5.10.3.5.2	B2 + output ripple	. Look on Scope	≪600 mV pk-pk	20 10 20
5.10.3.5.3	B2 - output voltage	S26-1, S27-8	-20.50 ±2.50V	-20.37 Vy 20.64
5.10.3.5.4	B2 - output ripple	Seen on Scope	<600 mV pk-pk	20 ml 20
5.10.3.6.1	B3 + output voltage	\$26-1, \$27-9	20.50 ±2.50V	2010 V (5) 20.55
5.10.3.6.2	B3 + output ripple	Seen on Scope	≪00 av pk-pk	20 0 0 20
5.10.3.6.3	B3 - output voltage	S26-1, S27-10	-20.50 ±2.50V	-20,164 (6) 20.63
5.10.3.6.4	B3 - output ripple	Seen on Scope	<60® mV pk-pk	25 4 20
5.10.3.7.1	B4 + output voltage	S26-1, S27-11	20.50 ±2.50V	20.80
5.10.3.7.2	B4 + output ripple	Seen on Scope	<60@ mV pk-pk	20 20
3.10.3.7.3	B4 - output voltage	\$26-1, \$27-12	-20.50 ±2.50V	-20.53 V (8) 20.81
5.10.3.7.4	B4 - output ripple	Seen on Scope	≪60@ mV pk-pk	20 20
5.10.3.8.1	B5,7 + voltage	S26-2, S27-1	20.50 ±2.50V	20,08 V. (9) RC.17
5.10.3.8.2	B5,7 + ripple	Seen on Scope	≪50© mV pk-pk	30 2 90
5.10.3.8.3	B5,7 - voltage	\$26-3, S27-2	-20.50 ±2.50V	-2051 V. (15) 2019
5.10.3.8.4	B5,7 - ripple	Seen on Scope	≪50% mV pk-pk	30 40.
5.10.3.9.1	B6 + voltage	S26-2, S27-3	20.50 ±2.50V	20.29 (11) 20.53
5.10.3.9.2	B6 + ripple	Seen on Scope	≪5000 mV pl -pk	20al. 20
5.10.3.9.3	36 - voltage	\$26-2, \$27-4	-20.50 ±2.50V	-20,55 / (12) 20,55
5.10.3.9.4	L6 -   ripple	Seen on Scope	<600 mV pk-pk	- 4 <u>20</u>
5.10.3.10.1	SMA Htr + voltage	<b>\$26-2, \$27-5</b>	21.20 ±2.12V	22114. [13] 3241
5.10.3.10.2	SMA Htr + ripple	Seen on Scope	<53® mV pk-pk	200V. Za-
5.10.3.10.3	SMA Htr - voltage	S26-2, S27-6	-21.20 <u>+</u> 2.12 V	-21.62 V.114-32.92
5.10.3.10.4	SNA Etr - ripple	Seen on Scope	<630 mV pk-pk	2645 20
5.10.3.11.1	SMA +7V Voltage	S26-2, S27-7 (S27-8 for RD7)	7_%0 ±0.80V	7.645 V (15) 7.827
5.10.3.11.2	SM4 +7V output ripple	Seen on Scope	≪1® □V pk-pk	35al 40

REF PARA	DESCRIPTION		DVM SVICE POSITIONS	LDOTS	- TOTAL	
5.10.3.12.1	SMA +29V output v	oltage	S26-2, S27-9 (S27-11 for RDT)	29.50 <u>+</u> 1.567		30.70
5.10.3.12.2	SMA +29V r	ipple	Sess on Scope	≪70 mV, pk-pk	50-V	60
3.10.3.12.3	SHA -29V V	oltage	S26-2, S27-10 (S27-12 for RDT)	-29.50 ±1.50V	30.300	30.72
5.10.3.12.4	£MA -29⊽ г	ipple	Sees on Scope	<870 mV pk-pk	60-L	60
5.10.3.13.1	MIX	oltage	\$26-3, \$27-1	30.00 ±0.907	29.95 4 (18)	30.26
5.10.3.13.2	MIX T	ipple	Seem on Scope	<000 mV, pk-pk	80 m	80
5.10.3.14.1	Redicaster v	oltage	S26-3, S27-2	8.50 ±0.859	8.4657	5,516
5.10.3.14.2	Rediometer r	ippla	Seem on Scope	<250 =7 pk-pk	30 NJ.	30
5.10.3.15.1	CDVT V	ol tage	\$2 <del>6-</del> 3, \$27-3	8.00 <u></u>	7.53/4/20	7.709
5.10.3.15.2	क्का क	ir:le	Sees on Scope	<b>Q40</b> ≤ <b>7</b> pk-pk	25 ml	20
5.10.3.16.1	Analog + V	o) tage	S26-3, S27-4	21.20 ±2.12V	22.214 (31)	27,46
5.10.3.16.2	Amalog + r	ipple	Seen en Scope	≪30 aV pk-pk	40 a V.	40
e 10.3.16.3	Analog - v	ol tage	\$26-3, \$27-5	-21.20 ±2.127	-12.29kg	27.53
.0.3.16.4	Analog - r	ipple	Seen on Scope	≪630 mV pk-pk	2500	20
5.10.3.17.1	Electromech. v	oltage	\$26-3, \$27 <b>-</b> 6	33.40 ±3.34⊽	32.97 V CIS	3346
5.10.3.17.2	Electromech. r	ipple	Seen on Scope	Q.0V pk-pk	40.0	60
5.10.3.18.1	Outgas 🧳 v	oltage	\$26-3, \$27 <b>-</b> 7	100.0 ±12.07	105.211	103.94
5.10.3.18.2	Outgos output r	1pple	Seem on Scope	<.07 pk-pk		225
5.10.4.1	Input current tel	<b>E</b> atry	\$26-4, \$28-2 (\$28-4 for RDT)			2992
5.10.4.2.1	Band 1 + volt. te	leatry	S26-4, S28-5		3.752	3.81Z
5.10.4.2.2	Rend 1 -		S28-6		3.741	3790
5.10.4.3.1	Bond 2+		S28-7		3.706	3765
5.10.4.3.2	Band 2-		<b>\$28-8</b>		3.695 3	,744
5.10.4.4.1	Band 3+		S23-9		3.717 3	,746
5.10.4.4.2	Band 3-		\$28-10		3.716 3	· 765
5.10.4.5.1	Band 4+		\$28-11		7.726	755
5.10.4.5.2	Bend 4-		\$26 <b>-</b> 4, \$28-12	٠.	3.737	5 <u>.78</u> 9
5.10.4.6.1	Band 5,7+		\$26-5, \$28-1			.714
5.10.4.6.2	Band 5,7- volt. to	olestry	526-5, \$28-2		3,659 3	.676

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#### 10.4 Performance test (continued)

YT PARA	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	MEASUREMENT PRIMARY REDUNDANT
5.10.4.7.1	Band 6 + volt. talentry	S26-5, S28-3		+3.674 V. 3.771
5.10.4.7.2	Bend 6 -	S28-4	•	3,706 3,755
5.10.4.8.1	SMA Htr +	S28-5	•	4.041 4.102
5.10.4.8.2	SMA Htr -	S28-6		4.103 4.161
5.10.4.9	SMA +7V	\$26-5, \$29-7 (\$27-8 for RDT)	•	4903 5,009
5.10.4.10.1	SMA +29V	S26-5, S28-9 (S27-11 for RDT)	+ + <del>*</del> *	4.156 4,236
5.10.4.10.2	SMA -29V	\$26-5, \$28-10 (\$27-12 for RDT)		3.471 3.625
5.10.4.11	MUX	\$26-6, \$28-1		4262 4255
5.10.4.12	Radiometer	S26-6, S28-2		· 4.694 4.673
5.10.4.13	CDA A	S26-6, S28-3	•	4,234 4,326
5.10.4.14.1	Analog + voit, telemtry	S26-6, S28-4	,	3.975 4.018
5.10.4.14.2	Analog -	<b>S26-6</b> , <b>S28-5</b>		3.915 3.449
.10.4.15	Electromech.	S28-6		4050 9111
.10.4.16	Outgas volt. telemetry	<b>S26-6, S28-7</b>		5274 5192
5.10.5.1.1	Analog + load current	\$26-3, \$27-11 mV	+ 10 = Amps	15.392 aV by 5,600
5:10.5.1.2	MUX	\$26-3, \$27-12 mV	÷ 10 = Amps	4633 (25/4/145
5.10.5.1.3	.Band 1 +	\$26-7, \$34-1 mV	÷ 0.5 = mA	91.38 16, 92.52
5.10.5.1.4	Band 1 -	S34-2	1 .	-91.51 (27) 92.74
5.10.5.1.5	2 +	s34-3 ·		90.32 (18) 91.59
5.10.5.1.6	2 -	S34~4		-91.15 (21) 92,38
5.10.5.1.7	3 +	\$34-5		90.97 (20)41.64
5.10.5.1.8	3 -	s34 <b>-</b> 6	Į	-90.78 (11) 92.03
5.10.5.1.9	4 +	S34-7		91.25 (12) 87.5%
5.10.5.1.10	4 -	S34-8		-90.92 (33)92.18
5.10.5.1.11	5,7 +	S34-9		90.33 (17) 90.75
5.10.5.1.12	5,7 -	S34-10		-89.50 (15) 90,06
5.10.5.1.13	6 +	\$ \$34-11	1	47.49 1:047.75
5.10.5.1.14	Band 6 -	\$26-7, \$34-12	I	-47.03 67,47.63
5.10.5.1.15	SMA Htr +	S26-8, S34-1 mV	÷ 0.5 = mA	47.68 08/45,3cx
5.10.5.1.16	SMA Btr - load current	S26-8, S34-2 mV	≠ mA	-8.936 (9) 9.057

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## 10.4 Performance test (continued)

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				<i>y</i> = <i>y</i> = <i>x</i>
REF. PARA.	DESCRIPTION	POSITIONS	LIMITS	PEDIAN PARIPARI
5.10.5.1.17	SMA +29V load current	\$26-8, \$34-3 <b>s</b>	v ÷ 0.402 = ±4	50.7/1/20 5/39
5.10.5.1.18	SMA -29V	\$34-4 E	¥ ÷ 0.402 = ±A	-50.46 de 5/17
5.10.5.1.19	SMA +7V	S34-5	V ÷ 0.1 = Amps	.28 00 V. (40) , 2545
5.10.5.1.20	Analog -	\$34~6 E	0 ÷ 0.402 = 2A	-2673 Kest 270Z
5.10.5.1.21	Radiomoter	S34-9 =	AV + 0.5 = mA	151.53 2 (40/52.56
5.10.5.1.22	CDVU	S34-10 E		2693 V. 40 12756
5.10.5.1.23	Electromech. load current	526-8, S34-11 <sup>10</sup>	V ÷ 0.402 ≈ 15A	.2100 V. 60 -2/3/
5.10.5.2.1	Bus power supply voltage	\$26-1, \$27-1 (\$27-3 for RDT)		35.01 V. pp 35.00
5.10.5.2.2	Bus input current	\$26-1, \$27-2 E (\$27-4 for RDT)	•	105.64 (45) 109.65
5.10.5.2.3	PIN (Section 5.10.5)		36	7.845 378.175
5.10.5.2.4	PIN (Section 5.10.3)		3€	9.285 577.265 1
5.10.5.2.5	P <sub>IN</sub> (avg)		Ľ.	2.565 377.72
5.10.5.2.9	Input current at current l	imit	26-1, 27-2 (26-1 27-4 Rd	122.9 my. 126.99
	Input voltage at current l	imit	27-1 (27-3 Rd	e) 34.884. 34.81
	MUX voltage at current lin	nit .	26-3, 27-1	30.104. 30.22
	MUX current at current lim	ait	27-12	51.14 N. 5337
5.10.5.3.1	Pour		7	168.87 274.635 ps
5.10.5.3.2	Efficiency		>70%	73.25 <u>%</u> 73 <u>1</u> 5%

INANT ANGER #34 743 34544 INFOT ROWER #1= 749 235 AUE INPUT FOMER= 349 545 CUTPUT POMER= 349 34 EFFICIENCY = 73,25

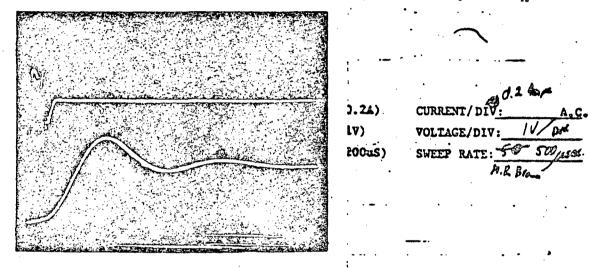
19297 FOWER #2= 779 175 19297 FOWER #1= 777 265 Are 19597 FOWER= 777 73 09757 FOWER= 274 475 EFF101ENCY = 73 15

TS 166U3 Rev B 18 December 1980

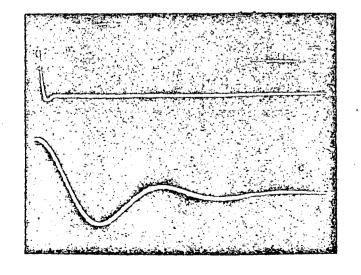
#### 10.4 Performance test (continued)

EF. PARA.	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	MEASUREMENT PRIMARY REDUNDANT
5.10.6.1	+7V output pulsed	\$26-2, \$27-7 (\$27-8 for RDT)	7.10 <u>+</u> 0.80V	7.043 V 7.206
5.10.6.2	Photograph of transiants		a current and (	SWA 1711

10.6.2 Photograph of transients induced on input bus current and SMA +7V output is being pulse-loaded-PRIMARY SIDE



5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as pulse-lead on SMA +7V outputs is being removed - PRIMARY SIDE



(0.2A) CURRENT/DIV: O.2A. A.C.

(1V) VOLTAGE/DIV: 1V.

(200us) SWEEP RATE: 58 M Sec.

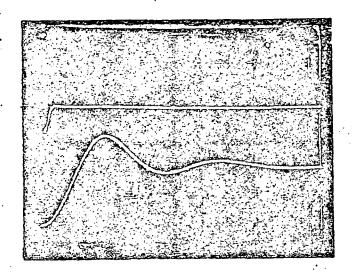
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

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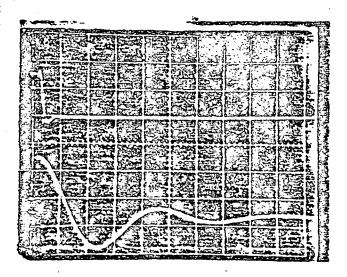
REF. PARA. DESCRIPTION

5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V output is being pulse-loaded-REDUNDANT SIDE



(0.2A) CURRENT/DIV: 17 AA.C.
(1V) VOLTAGE/DIV: 1U
(200us) SWEEP RATE: 500 mass

5.10.6.2 Photograph of transients induced on input bus current and SMA +7V output voltage as pulse-load is being removed-REDUNDANT SIDE



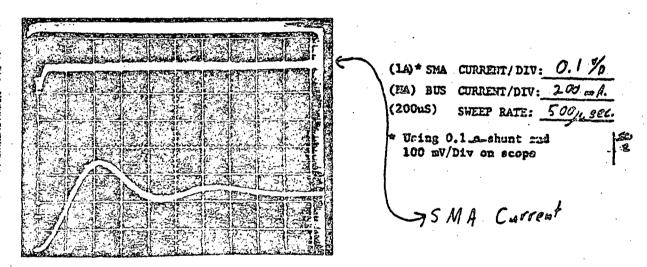
(0.2A) CURRENT/DIV: 1214 A.C.
(1V) VOLTAGE/DIV: 1 U
(200us) SWEEP RATE: 500 1122

TS 16603 Rev B \$0 December 1000 Sled-2 Fee-81

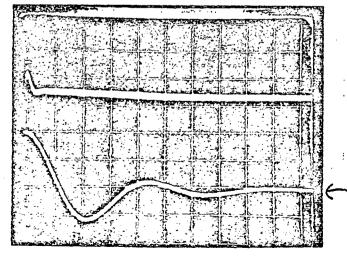
#### 10.4 Performance test (continued)

REF. PARA.	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	PRIMARY RECORDANT
5.10.6.3	Input bus current	\$26-1, \$27-2 (\$27-4 for RDT)		110.20 = 1. 112.70
5.10.6.4	SMA +7V IM- pulsed	S26-5, S28-7 (S28-8 for RDT)		4. <u>573</u> V. 4.7/7
5.10.5.5	SMA +7V load current- pulsed	(\$26-8, \$34-5	•.	4653V ,4741

5.10.6.6 Photograph of transients induced on input hus current and SMA +7V load current as SMA +7V output is being pulse-loaded-PRIMARY SIDE



5.10.6.6 Photograph of transients induced on input bus current and SMA +7V-load current as pulse-load is being removed-PRIMARY SIDE



(1A) \* SMA CURRENT/DIV: 0./ %

(NA) BUS CURRENT/DIV: 200 m A

(200US) SWEEP RATE: 500 sec.

\*Using 0.1\_shunt and 100my/Div on Scope

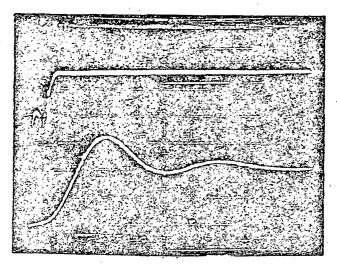
75MA Carrent

TS 16403 Bev B 36 December 1900 360-2 74-81

#### 10.4 Performance test (continued)

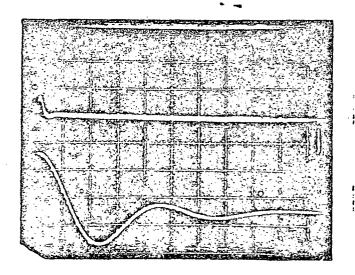
REF. PARA. DESCRIPTION

5.10.6.6 Photograph of transients induced on imput bus current and SMA + 7V load current as SMA + 7V output is being pulse loaded - REDUNDANT SIDE



\*Using 0.1 - hunt and 100 mV/Div on acope.

5.10.6.6 Photograph of transients induced on input bus current and SMA + 7V load current as pulse-load is removed - REDUNDANT SIDE



(2A) BUS CURRENT/DIV: 1

(2A) BUS CURRENT/DIV: 200 m ft

(200us) Sweep rate: 500 frag

\*Using 0.1\_\_chunt ond :100av/Div on scope. 2

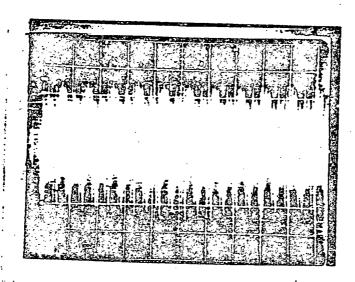
TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

EF, PARA

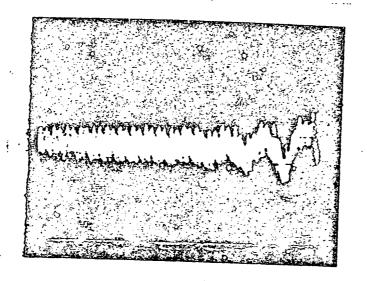
DESCRIPTION

5.10.7.1 Photograph of reflected input current ripple - PRIMARY SIDE



(10a) CURRENT/DIV: 2 A. A.C. (10us) SWEEP RATE: 10 In sec.

5.10.7.1 Photograph of reflected input current ripple - REDUNDANT SIDE



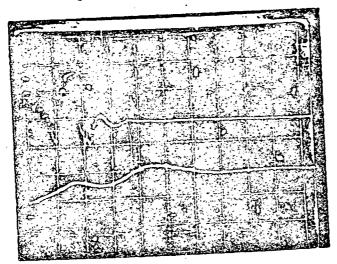
(Ema) CURRENT/DIV: 2m A E.C.
(HOUS) SWEEP RATE: 10 March

Input current - full load S26-1, S27-2 .5.10.8.1.1 (S27-4 for RDT) 105.57 N 107.87 84.76 N 97.08

Input current w/o analog Same 5.10.8.1.2

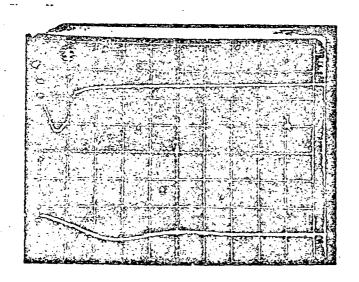
load

Photograph of transients induced on input bus current and analog + voltage as 5.10.8.1.3 analog output is enabled - PRIMARY SIDE



VOLTAGE/DIV:\_ ·(2<del>V</del>) CURRENT/DIV: 2 Ang. (1A)· (500us) SWEEP RATE: 500 SEC.

5.10.8.1.3 Photograph of transients induced on input bus current and analog + voltage as analog output is disabled - PRIMARY SIDE



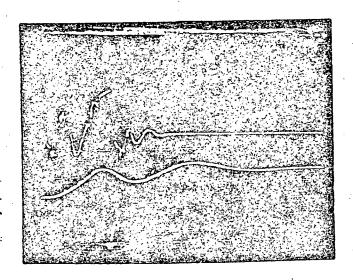
VOLIAGE/DIV: IV (5V) CUPRENT/DIV: 2 Amps. (IA) SWEEP RATE: 500 a sec (lmS)

75 16603 Rev B 18 Bacombar 1980

10.4 Perfermance test Countinued)

RYT PARA TESCRIPTIO

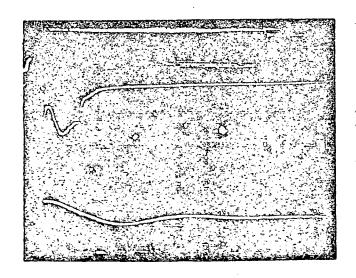
5.10.8.1.1 Photograph of transients induced on input bus extent and analog + sutput voltage as analog output is enabled - William III.



(IV) VOLIAGION: 7/

(14) CTREAT/DIT: 2/A

5.10.8.1.3 Photograph of transients induced on imput bus current and analog - output voltage as analog output is disabled - ENDUNDANT SIDE.

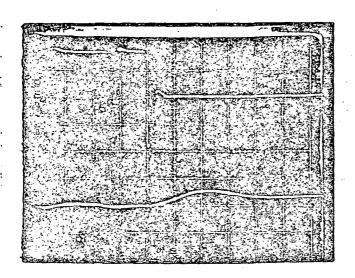


(SV) VOLTAGR/DIV: 20

(la) CURRENT/DIV: 2A

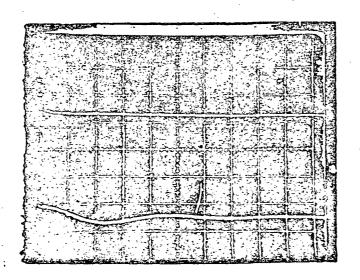
(les) som par: 50: le

F. PARA.	DESCRIPTION	DVH SWITCH POSITIONS	LIMITS	HEASU: PRIMARY	REDUNDANT
5.10.8.2.1	Input bus current w/o SMA +7V load	S26-1, S27-2 (S27-4 for RDT)		96.35 ml.	95.30
5.10.8.2.2	Photograph of transients			SMA +7V out	out" '



(5V) VOLTAGE/DIV:  $\frac{2V}{1 \text{ A-p.}}$ (1A) CURRENT/DIV:  $\frac{1 \text{ A-p.}}{1 \text{ COOM 560}}$ 

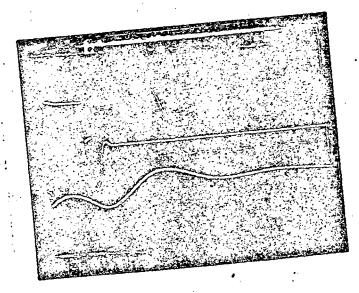
5.10.8.2.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V is disabled - PRIMARY SIDE.



(2V) VOLTAGE/DIV: 2V (1A) CURRENT/DIV: 1A=e. (2ms) SWEEP RATE: 500µsec.

DESCRIPTION

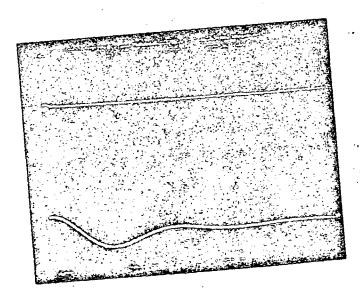
Photograph of transients induced on input bus current and SMA +7 output EF PARA voltage as SMA +7V is enabled - REDUNDANT SIDE 5.10.8.2.2



VOLTAGE/DIV: (5V) CURRENT/DIV: (1A)

(200us) SWEEP RATE:

5.10.8.2.2 Photograph of transients induced on input bus current and SMA +7V output voltage as SMA +7V is disabled - REDUNDANT SIDE



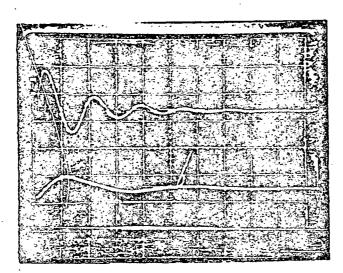
VOLTAGE/DIV: 20 (2V)

CURRENT/DIV:\_\_\_ (1A)

SWEEP RATE: SAM (2mS)

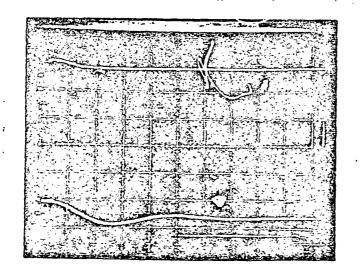
EF. PARA. DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	ezast Primary	REDUNDANT
5.10.8.2.3 Imput bus current w/ SMA <u>+29V</u> load	(S27-4 for EDT)		102.33 41.	

5.10.8.2.4 Photograph of transients induced on input bus current and SMA +29V output voltage as SMA +29V is enabled - PRIMARY SIDE



(0.5V) CURRENT/DIV: 0.5 Amg.
(1ms) SWEEP RATE: 5.00 pt. sec.

5.10.8.2.4 Photograph of transients induced on input bus current and SMA +29V output voltage as SMA +29V is disabled - PRIMARY SIDE

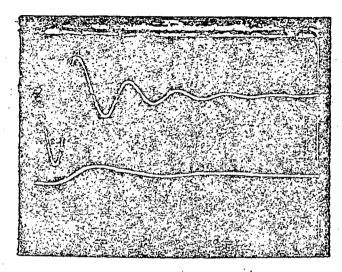


(2V) VOLTAGE/DIV: 1V (0.5A) CURRENT/DIV: 0.5 Amg. (1ms) SWEEP RATE: 500 \(\omega\$ sec.

TP. PARA.

DESCRIPTION

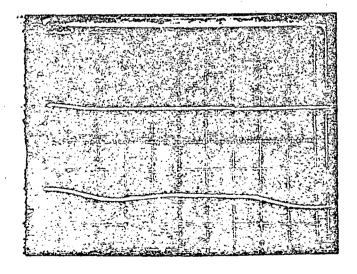
5.10.8.2.4 Photograph of transients induced on input bus current and SMA +29V output voltage as SMA +29V is enabled - REDUNDANT SIDE



2V) VOLTAGE/DIV: 11/ D.5A) CURRENT/DIV: 5A

1ms) SWEEP RATE: SOLLER

5.10.8.2.4 Photograph of transients induced on input bus current and SMA +29V output voltage as +29V is disabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: //

(0.5) CURRENT/DIV: 57

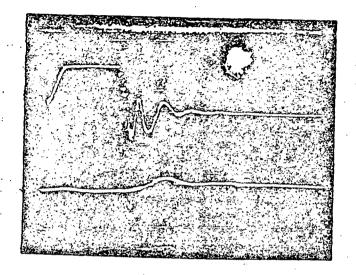
(1ms) SWEEP RATE: 500 USA

(320)

₹,

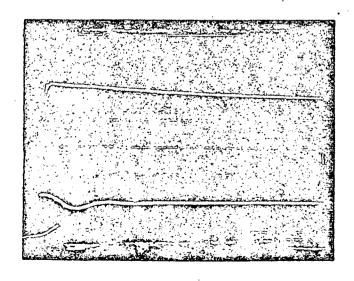
PARA, DESCRIPTION

5.10.8.3.2 Photograph of transients induced on input bus current and CDVU output voltage as CDVU is enabled - REDUNDART SIDE



(2V) VOLTAGE/DIV: 10
(0.5A) CURRENT/DIV: 5A
(1ms) SWEEP RATE: 5

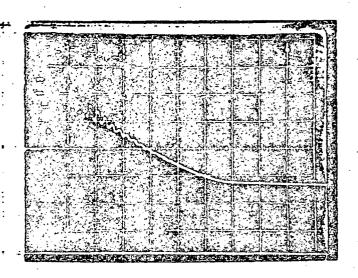
5.10.8.3.2 Photograph as transients induced on input bus current and CDVU output voltage as CDVU is disabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: 10.5A) CURRENT/DIV: 50.55 (1ms) SWEEP RATE: 50.55

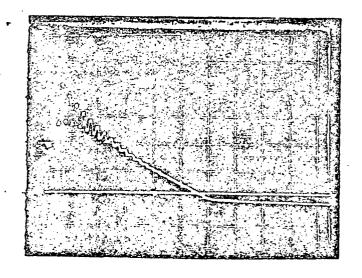
PARA DESCRIPTION

5.10.9.1 Photograph of turn-off transient of input bus voltage and input bus current as bus voltage is removed - PRIMARY SIDE



(5V) VOLTAGE/DIV: 5V
(5A) CURRENT/DIV: 5A
(500us) SWEEP RATE: 500 µ sec.

Photograph of turn-off transient of input bus voltage and input bus current as bus voltage is removed - REDUNDANT SIDE



(5V) VOLTACE/DIV: 5V
(5A) CURRENT/DIV: 5A
(500us) SWEEP RATE: 500 µ sec.

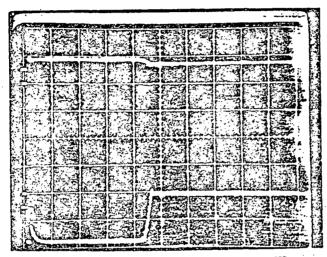
TS 16603 Råv B 18 December 1980

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10.4 Performance test (continued)

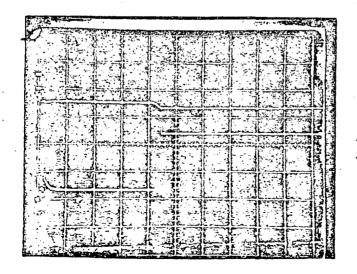
REF. PARA.	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	MEAS PRIMARY	UREMENT REDUNDANT
5.10.9.2	UUT stays off when bus is reapplied.	S1-ON (S2-ON for RDT)	•		

5.10.9.3 Photograph of turn-on transient of bus voltage and current as QN command is issued - PRIMARY SIDE



(5V) VOLTAGE/DIV: 5 V
(5A) CURRENT/DIV: 5 A = 05
(100=6) SWEEP RATE: 100 = 500.

5.10.9.3 Photograph of turn-on transient of bus voltage and current as ON command is issued - REDUNDANT SIDE



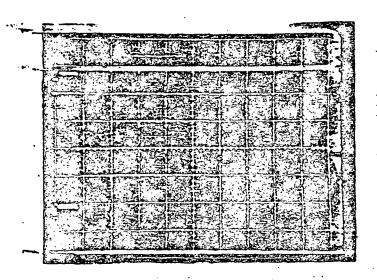
(SV) VOLTAGE/DIV: 50 (SA) CURRENT/DIV: 5/7 (100mS) SHEEP RATE: 100m S

TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

IF, PARA, DESCRIPTION

5.10.9.4 Photograph of turn-off transient of input bus voltage and current as OFF command is issued - PRIMARY SIDE

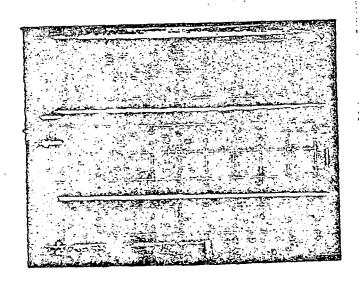


(SV) VOLTAGE/DIV: 5 V.

(SA) CURRENT/DIV: 5 Amps

(10ms) SWEEP RATE: 10m sec.

5.10.9.4 Photograph of turn-off transient of input bus voltage and current as OFF - command is issued - REDUNDANT SIDE



(5V) VOLTAGE/DIV: <u>SU</u>
(5A) CURRENT/DIV: SA

(10ms) SWEEP RATE: 10 m S

REF. PARA.	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	PRIMARY REDUNDANT
5.10.9.5	Record	S27-2 (S27-4)		105.29 1.105.53
5.10.9.6	Record	(S27-4 (S27-2)		84.52 ml. 20,53
	Record	\$27-2 (\$27-4)		
	•		•	23.11 N. 95.11
5.10.9.7	Record that UUT turns on.	(Checkmark)		· V
5.10.10.1	Input bus current AFTER it reads ~ 17A AND input bus voltage reads ~ 21V.	S26-1, S27-2 (S27-4 for RDT)		110.95 N 125103
5.10.10.2	Input bus voltage with 17.0A load	S26-1, S27-1 (S27-3 for RDT)	, e •*	35.02 V. 35.00
5.10.10.3	Input current telemetry output	\$26-4, \$28-2 (\$28-4 for RDT)	•	3.035 V. 3.521
5.10.10.4	Input current telemetry	S26-4, S28-2 (S28-4 for RDT)	. •• .	3.002 V. 3.505
	Input bus voltage	S26-1, S27-1 (S27-3 for RDT)		
	Input bus current	S26-1, S27-2 (S27-4 for RDT)		NA N. 124.15
5.10.10.5	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)		3.002 V. 3026
	Input bus voltage	S26-1, S27-1 (S27-3 for RDT)	••	35.00 V. 35.00
	Input bus current	S26-1, S27-2 (S27-4 for RDT)		109.70 ml. 105.47
5.10.10.6	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)		2.500 V. 2.520
	Input bus voltage	S26-1, S27-1 (S27-3 for RDT)		34.99 V. 35.00
	Input bus current	S26-1, S27-2 (S27-4 for RDT)		95.31 N. 94.4-3
5.10.10.7	Input current telemetry output	S26-4, S28-2 (S28-4 for RDT)		2,008 V. 2.003
	Input bus voltage	S26-1, S27-1 (S27-3 for RDT)		35.00 V. 35.00
	Input bus current	\$26-1, \$27-2 (\$27-4 for RDT)		80.79 N. 75.18

#### 10.4 Performence test (continued)

RIT PARA	DESCRIPTION	DVM SWITCH POSITIONS	LPHIS	-MZAST PRIMARY	RECEIPT STREET
5.10.10.8	laput current telemetry	\$26-4, \$28-2 (\$28-4 for RDE)		1.5036 V.	11508
	Input bus voltage	\$26-1, \$27-1 (\$27-3 for <b>EDT</b> )	•.	35.01 V.	35.00
	Input bus current	\$26-1, \$27-2 (\$27-4 for RDT)		62.47	6290
5.10.10.9	Input current telemetry output	\$26-4, \$28-2 (\$28-4 for EDT)		1:0026 V.	6097
	Tapur bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)		35.00 V.	35.00
	Imput bus current	\$26-1, \$27-2 (\$27-4 for EDT)	•	47.53_V.	46.15
5.10.10.10	Imput current telemetry output	526-4, S28-2 (S28-4 for RDF)		0.4916 V.	15270
·	Imput bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)	•	35.01 V.	35,00
	Imput bus current	\$26-1, \$27-2 (\$27-4 for RDT)	<del>-</del> .	33.00mg.	:
5.10.10.11	Imput current telemetry	526-4, 528-2 (526-4 for RDT)	فيده	0.2030V	
	Empu: bus voltage	\$26-1, \$27-1 (\$27-3 for RDI)		35.00 V.	,
	Imput bus current	S26-1, S27-2 (S27-4 for RDT)		29.73 J.	• •
5.10.10.12	Imput current telemetry output	\$25-4, \$28-2 (\$28-4 for RDT)		-0.2467 V.	•
	Imput bus voltage	\$26-1, \$27-1 (\$27-3 for RDT)		34.99 V.	
	· Imput pas carrent	\$26-1, \$27-2 (\$27-4 for RDT)	•	10.545	discussion
5.10.11.1	Band 1+ output voltage	\$26-1, \$27-5		7398	24.56
5.10.11.2	Band 1- outpur voltage	\$27-6		- 24117-	23.96
5.10.11.3	2+ 1	S27-7		74.28	2367
5.10.11.4	2.	\$27-8		-34178-	24.18
5.10.11.5	3+	S27-9		26.21	2429
5.10.11.6	<b>♥</b> 3- <b>♥</b>	\$ \$27-10		-23.27-	73.9.L
5.10.11.7	Band 4+ output voltage	526-1, 527-11		24,61	74.46

BEP. PARA.	DESCRIPTION	FOSTITUES	LEAITS	HZAST FRIMARY	REMOVITANT
5.10.11.3	التقط 4- output voltage	926-1, <i>9</i> 27-12		-74.13 -	- 24.09
5.10.11.9	5,7+	826-2, 827-1	• .	23.31	23,83
3.10.11.10	5,7-	827-2		-23.27	- 23.60
5.10.11.11	··· \$+	827-3		22,54	23.47
5.10.11.12	Band 6-	S27-4		- 23.50	- 23,78
5.10.11.13	SHA Htr +	s27-5	•	24.72	25.56
5.10.11.14	Htr -	-\$2 <b>7-</b> 6		-25:05	- 25.44
5.10.11.15	+7♥	s27-7		<u>9.80</u> 7	N/A
5.10.11	+77	(S27-8 For NDT)	•	R/A	9,759
5.10.11	+29⊽	827 <i>-</i> 9		3 <u>/.73</u>	M7A
5.10.11	+29V	(S27-11 For EDT)		r/A	31972
5.10.11	-29V	S27-10	•	-32.05	A M
	SMA -29V	S26-2, (327-12 for EDT)		B/A	- 31.80
5.10.11.18	Radiometer	<b>\$26-3, \$27-2</b>	,	958	9.853
5.10.11.19	CDVU	327-3		9.70	9,638
5.10.11.20	Analog +	<b>927-4</b>		16.88	27.23
5.10.11.21	Analog -	827-5		- <u>24.4</u> 2	-7 <u>5,3</u> 3
5.10.11.22	Electromech.	\$27 <del>-6</del>	•	45:29	47.76
5.10.11.23	Outgas	<b>S27-7</b>		103,69	10240
5.10.11.24	Parasitic v	327-9		3/100	N/A IN
ag.	Parasitic output voltage	\$26-3, (\$27-10 for NDT)		H/A	31.75 3
3.10.11.25	Bend 1+ TM output	S26-4, S28-5		4,372	4:490
5.10.11.26	1-	828-6		4.398	4.361
5.10.11.27	.2+	528-7		4.416	4307
5.10.11.28	2-	\$28-8		4,396	4.384
5.10.11.29	3+	-828 <del>-9</del>		4,770	4.423
5.10.11.30	3-	\$28-10		4.240	4.350
5.10.11.31	. 4+	\$28-11		4.466	4.445
5.10.11.32	4-	.926-4, <b>828-</b> -2		4.336	41.381
5.10.11.33	Band 5,7+ TM output	826-5, 828-1	•	4,253	4.363

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#### . 10.4 Performance test (continued)

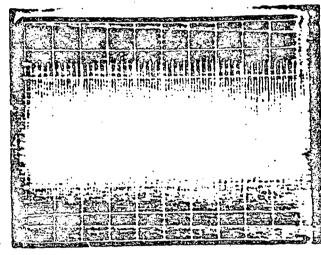
REP PARA	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS PRIMARY REDUNDANT
5.10.11.34	Band 5,7- TM output	826-5, S28-2	4242 0.302
5.10.11.35	6+	S28-3	4.131 4.250
5.10.11.36	Bend 6-	<b>328-4</b>	4,290 4.342
5.10.11.37	SMA Htr +	S28-5	4.512 4.657
5.10.11.38	Htr -	S28-6	4,524 4.601
5.10.11.39	÷7V	\$28-7 (\$28-8 for RDT)	6.043 61019
5.10.11.40	+29V	S28-9 (S28-11 for RDT)	4,328 4.385
- 5.10.11.41	SMA -29V	\$26-5, \$28-10 (\$28-12 for RDT)	3671 3723
5.10.11.42	Radiometer	\$26-6, \$28-2	5.199, 5.340
5.10.11.43	CDAO	S28-3	5,378 5,383
5.10.11.44	Analog +	S28-4	4779 5339
5.10.11.45	-Aralog -	. S28-5	4.470 4.539
5.10.11.46	Electromech.	S28-6	5, 544 G 1800
5.10.11.47	Outgas - IM output	S26-6, S28-7	-1656 BALLES
5.10.12.1	Bus voltage	S26-1, S27-1 (S27-3 for RDT)	\$5.01 3 5:08B
5.10.12.2	Input bus current	S26-1, S27-2 (S27-4 for RDT)	35:37 36:08
5.10,12.3	SMA Etr + output voltage	\$26-2, \$27-5	21.39 21.93
5.10.12.4	Htr +   ripple	Seen on Scope	≪630 EV pk-pk 40 4C
5.10.12.5	Htr - voltage	\$26-2, \$27 <i>-</i> 6	- 22.09 - 22.63
5.10.12.6	SMA Htr - ripple	Seen on Scope	<530 mV pk-pk <u>40</u> <u>146</u> .
5.10,12.7	CDVU voltage	s26-3, s27-3	7.509 7.69Z
5.10.12.8	CDVU ripple	Seen on Scope	240 EV pk-pk <u>50</u> <u>60</u>
5.10.12.9	Outgas - output voltage	S26-3, S27-7	86.68 87.57
5.10.12.10	Outgas - output ripple	Seen on Scope	2.50V pk-pk 300mV 350mV
5.10.12.11	Parasitic output voltage	\$26-3, \$27-9 (\$27-10 for RDT)	30.01 30.60
5.10.12.12	Parasitic output ripple	Seen on Scope	<900 mV pk-pk 166 100

TS 16603 Rev B 18 December 1980

10.4	Performance test	(continued)

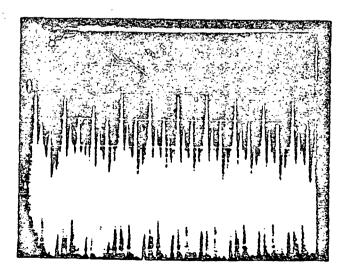
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	QUALITY				
EF PARA	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	meast Primary	REDUNDANT
5.10.13.1	Input current telemetry	\$26-4, \$28-2 (\$28-4 for RDT)		1096	19428
5.10.13.2	SMA Htr + output	S26-5, S28-5	•	3,909	4.011
5.10.13.3	SMA Htr -	s26-5, s28-6		4004	4410
5.10.13.4	CDVU	<b>526-6</b> , <b>528-3</b>		4218	4317
5.10.13.5	Outgas output telemetry	526-6, <b>528-7</b>	••	4325	396يت
5 10 14 1	Photograph of roflected	innur current rinn'	ia da autana m	NA - DOTMAS	א כדוים



(234) WRREYT/DIV: 1 14 AA.C.

(100S) SWEEP RATE: 50 Lac



(2mA) CURRENT/DIV: ZhijiA.C.

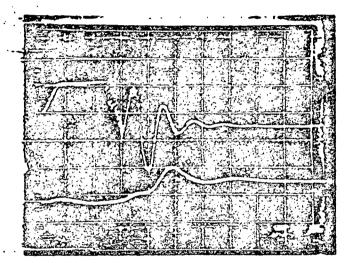
(10us) SWEEP BATE: 10 BLUE

TS 16603 Rev B 18 December 1980

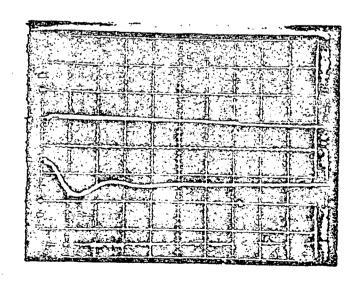
10.4 Performance test (continued)

DV		DWM SWITCH		MEASUREMENT	
REF. PARA.	DESCRIPTION	POSITIONS	1,1MITS	PRIMARY	REDUNDANT
5.10.15.1.1	Imput current with CDVU	S26-1, S27-2 (S27-4 for RDT)		33.61	34.23

5.10.15.1.2 Protograph of input bus current and CDVI output voltage as CDVI load is enabled - PRIMARY SIDE



5.10.15.... recognition input our current and the comput voltage as CDVU load is disabled - PRIMARY SIDE



(200ma) CURRENT/DIV: 200 M/F (200ma) SWEEP RATE: / M S

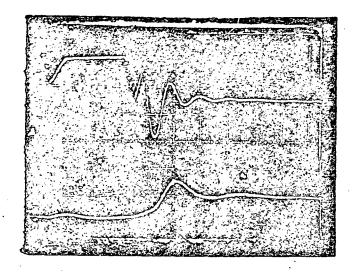
TS 16603 Rev B 18 December 1980

#### 10.4 Performance test (continued)

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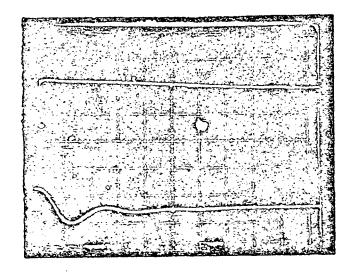
EF. PARA. DESCRIPTION

5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is enabled — REDUNDANT SIDE



(2V) VOLTAGE/DIV: //
(200mA) CURRENT/DIV: 200mA
(Ims) SWEEP RATE: /ms

5.10.15.1.2 Photograph of input bus current and CDVU output voltage as CDVU load is disabled — REDUNDANT SIDE

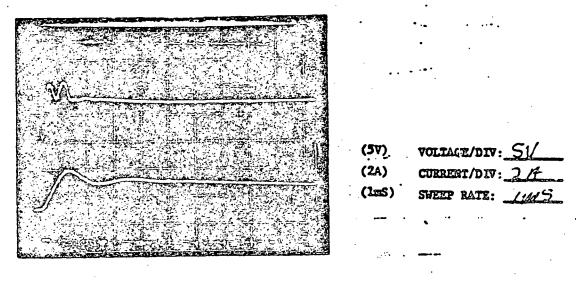


TS 16603 Rev B 18 December 1980

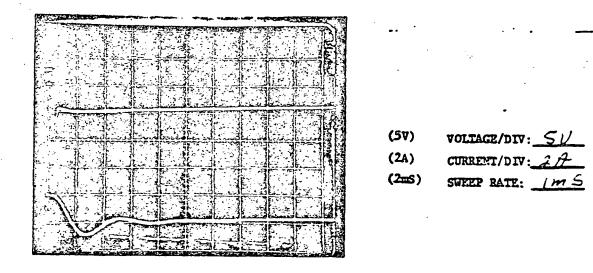
#### 10.4 Performance test (continued)

KEF. PARA.	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	MPASU PRIMARY	REMENT REDUNDANT
5.10.15.2.1	Input bus current with outges disabled	S26-1, S27-2 (S27-4 for EDT)	•	12.944	13.173

5.10.15.2.2 Photograph of input bus current and outgas voltage as outgas load is enabled - PRIMARY SIDE



5.10.15.2.2 Photograph of input bus current and outges voltage as outges load is disabled - PRIMARY SIDE

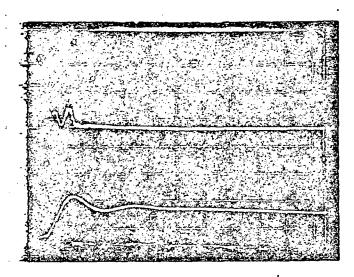


10.4 Performance test (continued)

PP PARA

DESCRIPTION

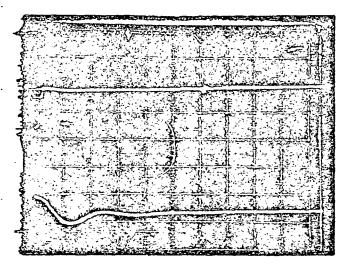
5.10.15.2.2 Photograph of input bus current and outgas voltage as outgas load is enabled - REDUNDANT SIDE



(5V) VOLTAGE/DIV: 5U
(2A) CURRENT/DIV: 27

(500ms) SWEEP RATE: 1m 5

5.10.15.2.2 Photograph of imput bus current and outges voltage as outges load is disabled - REDUNDANT SIDE



5V) VOLTAGE/DIV: 50

2A) CURRENT/DIV: 2.19

lms) SWEEP RATE: IMS

TS 16603 Rev B

#### 10.4 Performance test (continued)

x 100%

MPF. PARA.	DESCRIPTION	DVM SWITCE POSITION	LIMITS	MPASURPMPHT PRIMARY REDUNDANT
5.10.16.1	BPS voltage	\$26-1, \$27-1 (\$27-3 for RDT)		35.0649) 35.0C
5.10.16.2	EPS current	\$26-1, \$27-2 (\$27-4 for RDT)		15:19 (50) 15:689
5.10.16.3	SMA Htr +output voltage	\$26-2, \$27-5		21.77 (13) 22:15
5.10.16.4	SMA Htr +load current	S26-8, S34-1	·	46.43,18) 47.76
5.10.16.5	SMA Htr -output voltage	\$26-2, \$27-6		-22.16 (17) 22.57
5.10.16.6	SMA Htr -load current	\$26-8, \$34-2	-	-8.750 (79) 8.910
5.10.16.7	CDVU output voltage	\$26-3, \$27-3	•	7513 (20) 7.688
5.10.16.8	COVU load current	\$26-8, \$34-10		12684 (45) 2748
5.10.16.9	Parasitic output voltage	\$26-3, \$27-9 (\$27-	-10)	30.73 (21) 31.22
5.10.16.10	Parasitic load current	S26-8, S34-7		143.20 (46) 145.47
5.10.16.11	Input power (5.10.16.1 x 5.10.16.2)	•		53.165 54.912
5.10.16.12	Output power ((5.10.16.3 x 5.10.16.4) + (5.10.16.5 x 5.10.16.6) + (5.10.15.7 x 5.10.16.8) + (5.10.16.9 x 5.10.16.10		:E) .	17.217 17.878
5.10.16.13	Efficiency ((5.10.16.12) ÷ (5.10.16.11))			32.4% 32.4%

### #### 1 047 |

SMA #### 194 |

COVUE 4 037 |

PAPACITICE 10 947 |

IMPUT POWERE 53 165 |

OUTPUT POWERE 17 217 |

EFFICIENCY 32 4 % |

SMA #### 2 116 |

SMA ##### 2 116 |

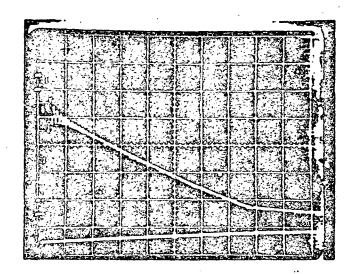
CDVUE 4 225 |

PAPASITICE 11 736 |

IMPUT POWERE 17 879 |

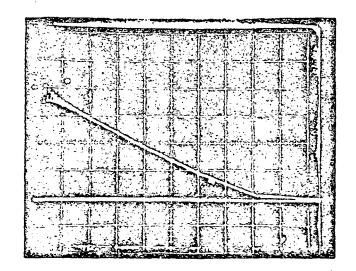
EFFICIENCY 32 6 % |

5.10.17.1 Photograph of input bus current and input bus voltage as is disable - PRIMAL SIDE



(5V) VOLTAGE/DIV:  $\frac{3\sqrt{3}}{2}$ (2A) CURRENT/DIV:  $\frac{3\sqrt{3}}{2}$ (URS) SWEEP RATE:  $\frac{1}{2}$ 

5.10.17.1 Photograph of input bus current and imput bus voltage as is disabled - REDUNDANT SIDE



(5V) VOLTAGE/DIV: SV

(2A) CURRENT/DIV: 3A

(1m.) SHEEP RATE: /MS

TS 16603 Rev B 18 December1980

### ORIGINAL PAGE IS OF POOR QUALITY

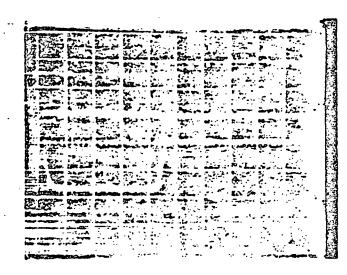
#### 10.4 Performance test (continued)

5.10.17.2 Unit stays off (check)

Princry

Redundant

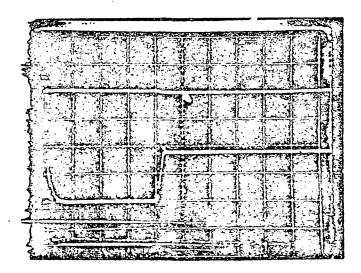
5.10.17.3 Photograph of input bus current and input bus voltage as is enabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: 51/

(2A) CURRENT/DIV: 2/7
(100ms) SHEEP RATE: /COMS

. 5.10.17.3 Photograph of input bus current and input bus voltage as as is enabled - REDUNDANT SIDE

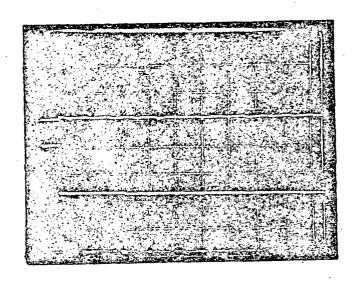


(2V) VOLTAGE/DIV: 5V
(2A) CURRENT/DIV: 7A

(100ms) SWEEP RATE: 100 1775

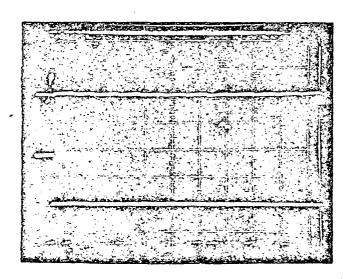


5.10.17.4 Photograph of input bus current and input bus voltage as is disabled - PRIMARY SIDE



(2V) VOLTAGE/DIV: 5 // (2A) CURRENT/DIV: 2/7 (10ms) SWEEP RATE: 10 m S

5.10.17.4 Photograph of input bus current and input bus voltage as is disabled - REDUNDANT SIDE



(2V) VOLTAGE/DIV: SU

(2A) CURRENT/DIV: 2/

(10ms) SWEEP RATE: 10mc

TS 16603 Rev B 18 December 1980

10.4 Performance test (continued)

DVH SWITCL

MEASUREMENT

F. PARA. DESCRIPTION POSITIONS

IONS LIMIT

PRIMARY REDUNDANT

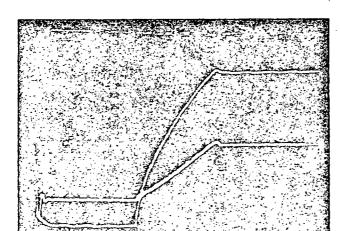
5.10.17.5 Record that UUT operates correctly.

(checkmark)

· V

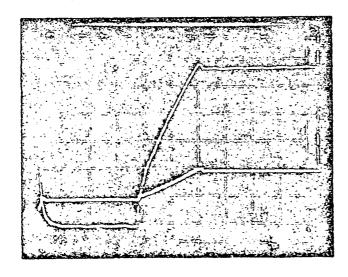
5.10.18.1 Photograph of input bus current and MUX output voltage as MUX enable

outgas) - PRIMARY SIDE



(5V) VOLTAGE/DIV: S/ (5A) CURRENT/DIV: S/A (20mS) SWEEP RATE: (2) (m) S

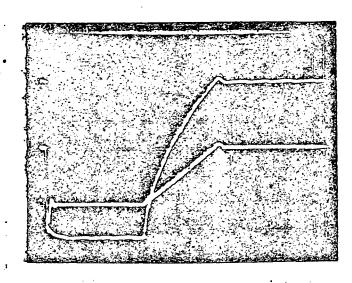
5.10.15.2 rnotograph of input bus current and parasitic output voltage as parasitic enable command is issued (all loads are ON except outgas) — PRIMARY SIDE



(5V) VOLTAGE/DIV: SV 45A) CURRENT/DIV: SA 420mS) SWEEP RATE: 10m S

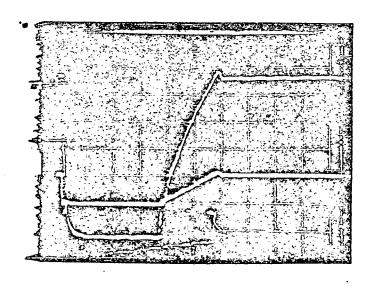


.10.18.1 Photograph of input bus current and MUX output voltage as MUX enable command is issued (all loads are ON except outgas) - REDUNDANT SIDE



(5V) VOLTAGE/DIV: 5U (5A) CURRENT/DIV: 5A (20ms) SWEEP RATE: 1C:115

5.10.18.2 Photograph of input bus current and MUX output voltage as parasitic enable command is issued (all loads are ON except outgas) — REDUNDANT SIDE





#### 10.4 Performance test (continued)

PEF PARA	DESCRIPTION	DVM SWITCH POSITIONS	LIMITS	MRASUREMENT PRIMARY REDUNDANT
5.10.18.4	Undervoltage Trip Point (ON/OFF)	S26-1, S27-1 (S27-3 for RDT)	18.0 <u>÷</u> 1.50 <del>∨</del>	15.09 BOB
5.10.18.5	UUT ctays OFF		• •	$\checkmark$
5.10.18.6	Undervoltage Trip Point (OFF/ON)	S26-1, S27-1 (S27-3 for RDT)	19.0 ±1.50V	15.95 18.88
5.10.18.7	Overvoltage Trip Point	\$26-1, \$27-1 (\$27-3 for RDT)	38.0 ± 2V	35.37 3 <u>9.93</u>
5.10,18.8	UUT stays OFF	•		VV
5.10,18.9	UUT turns ON			<u></u>

TS 16603 Rev B 18 December 1980

10.1 <u>Red</u>	undant-lead test		•
PROTOFLIGHT _	DNA OR FLIGHT V	S/N 004 T	PERATURE Confine
IN-PROCESS	DNA GUAL DNA	OR ACCEPTANCE:	V.
TESTING PHASE:	FINAL.		
REF. PARA.	DESCRIPTION	LIMITS	MEASUREMENT
5.3.1	Open light of 3646388	ON	
	Continuity light of 3646388	OFF	<u> </u>
5.3.2	Open light of 3646388	OFF	<b>₩</b>
	Continuity light of 3646388	ON	
5.3.3	Open light of 3646388	ON	
	Continuity light of 3646388	OFF	and the second second
5.3.4	Open light of 3646388	OFF	_
	Continuity light of 3646388	on	

5 Feb 82	P. Ellars
Date	Tester(s)

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TS 16603 Rev B 18 December 1980

10.2 Graund	isolation test		
PROTOFLIGHT N	A OR FLIGHT	. S/N 004	TEMPERATURE AND
IN-PROCESS M	A QUAL NA.	OR ACCEPTANCE	
TESTING PHASE: E	NAL PACKET. PHER	TO DELIVERY	
REF. PARA.	DESCRIPTION	LIMITS	MEASUREMENT
5.4.1.2	J19-4 (D) to J18-4 (N)	<12	0.0112
5.4.1.3	to J3-31	> 1 mC	3.0 M s
5.4.1.4	to J3-32	1	3.0 Ma
5.4.1.5	to J3-D2		3.00
5.4.1.5	to J3-72		3.22
5.4.1.7	to J3-C3		3.02
5.4.1.8	to J4-R1		4.04
5.4.1.9	to J3-S5		00
5.4.1.10	to J3- <b>V</b> 5		00
5.4.1.11	to J3-S1	,	3.02
5.4.1.12	to J4-23		3.20
5.4.1.13	to 34-A2		3.80
5.4.1.14	to J4-C2		3.50
5.4.1.15	to J4-E2		4.02
5.4.1.16	to 34-G2		4.02
5.4.1.17	Ψ το J4-J2		4.20
5.4.1.18	J19-4 (D) to J4-M2		4.32
5.4.2.2	J3-71 to J3-81		4.42
5.4.2 3	to J3-32		生生
5.4.2.4	to J3-D2		4.80_
5.4.2.5	to J3-F2		4.81
5.4.2.5	to J3-43		4.58
5.4.2.7	to J4-R1		4.60
5.4.2.3	to J3-55		<u>»C</u>
5.4.2.9	to J3-V5		<u>80</u>
5.4.2.10	to J5-S1		4.20
5.4.2.11	Y to 14-23	4	4.76
5.4.2.12	J3-V1 to J4-A2	> 1 = 1	4.85 M22

TS 16603 Rev B 18 December 1980

#### 10.2 Ground isolation test (continued)

REF. PARA.	DESCRIPTION	LIMITS	MEASUREMENT.
5.4.2.13	J3-V1 to J4-C2	> 1 mG	5.15 M-
5.4.2.14	to 34-E2		5.17
5,4,2.15	to 34-G2		5.13
5,4,2,16	to J4-J2		5.12
5.4.2.17	y to 34-H2	>1 =2	5.19 W.sc
5.4.2.18	33-V1 to 318-4 (N)	< 1	0.079-
5.4.3.1.2	J3-31 to J3-C3	> 1 kg.	1.573 Km
5.4.3.1.3	1 to J4-R1	> 50 160	87K2
5.4.3.1.4	to 23-55	> 1 xG	<u></u>
5.4.3.1.5	to 23-75	> 1 aC	<del>60</del>
5.4.3.1.6	to J3-51	> 7500	1.01 K. a
5.4.3.1.7	:> 34-23	> 75 000	1.01 K &
5.4.3.1.9	to 34-A2	> 50 140	BZKA
5.4.3.1.9	to J4-C2	1	871ca
5,4,3,1,10	to J4-E2		87
5.4.3.1.11	to J4-G2		87
5.4.3.1.12	· v :> 34-32	· -	87
5.4.3.1.13	J3-B1 to J4-H2	> 50 kG	<u>B7</u> F-
5.4.3.2.1	J3-32 to J3-C3	> 1 163	1.51 KA
5.4.3.2.2	to 34-R1	> 50 🔀	87K2
5.4.3.2.3	to 23-55	> 1 = G	<u></u>
5.4.3.2.4	to J3-75	> 1 ac	D
5.4.3.2.5	to J3-51	> 7500	1.01 Kon
5.4.3.2.6	to J4-?3	> 75 00	1.01 K SC
5.4.3.2.7	to J4-A2	> 50 16.	BFILAL
5.4.3.2.3	to 34-C2	ł	87
5.4.3.2.9	to J4-E2		87
5.4.3.2.10	to J4-G2		87
5.4.3.2.11	to 34-32	Ť	<u>87</u>
5.4.3.2.12	J3-32 to J4-H2	> 50 163	BZKA
5.4.3.3.1	13-02 to 13-03	> 1 kG	152KEN

TS 16603 Rev 3 18 December 1980

#### 10.2 Ground isolation test (continued)

REF. PARA.	DESCRIPTION	LIMITS	MEASUREMENT
5.4.3.3.2	33-02 to 34-21	>50 kΩ	87kn
5.4.3.3.3	to J3-S5	> 1 mC	
5.4.3.3.4	to J3-75	> 1 =0	
5.4.3.3.5	to 33-51	> 7500	1.02 x
5.4.3.3.6	to J4-?3	> 7500	1.02 Kar
5.4.3.3.7	to 34-A2	> 50 kG	87Ka
5.4.3.3.8	to J4-C2		87
5.3.3.3.9	to 24-E2		87
5.4.3.3.10	== J4-G2		87
5.4.3.3.11	♥ to 34-32	<del>}</del>	87 V
5,4.3.3.12	J3-D2 to J4-M2	> 50 🔄	87K5
5.4.3.4.1	J3-F2 to J3-C3	> 1 160	151K-
5.4.3.4.2	to J4-R1	> 50 kG	BZKAL
5.4.3.4.3	to 33-55	. > 1 m2	<i>60</i>
5.4.3.4.4	to 33-75	> 1 mΩ	<u></u>
5.4.3.4.5	to J3-S1	> 7500	LOIER
5.4.3.4.6	to J4-23	÷ 750Ω	6018-80
5.4.3.4.7	to 34-A2	> 50 160	87K S-
5.4.3.4.8	to J4-C2	1	BTCC
5.4.3.4.9	to J4-E2		BFLA
5.4.3.4.10	to 34-G2	i	BZKI
5.4.3.4.11	20 34-32	<b>\</b>	Brka
5.4.3.4.12	33-F2 to 34-M2	> 50 kG	BZEE
5.4.4.2	J3-C3 to J4-R1	> 50 163	<u>87</u> K2
5.4.4.3	to J3-55	> 1 mΩ	_
5.4.4.4	to J3-V5	> 1 =0	00
5.4.4.5	to J3-S1	> 450 a	499_a
5.4.4.6	to J4-73	> 450 🗅	499 2
5.4.4.7	to J4-A2	> 50 kg	BIKS
5.4.4.8	🕏 to J4-02	> 50 kg	BZK2
5.4.4.9	J3-C3 to J4-E2	> 50 kΩ ·	87 Km

TS 16603 Rev 3 18 December 1980

#### 10.2 Ground isolation test (continued)

REF. PARA.	DESCRIPTION	LEMITS	MEASUREMENT
5.4.4.10	J3-C3 to J4-G2	> 50 kG	男子とか
5.4.4.11	to J4-J2	Ţ	87K5-
5.4.4.12	J3-C3 to J4-H2	> 20 KD	87×22
5.4.5.2	J4-R1 to J3-S5	> 1 mΩ	Ø
5.4.5.3	to J3-V5	> 1 =G	<b>20</b>
5.4.5.4	to J3-51	>50 Ka	BFKS
5.4.5.5	to J4-P3	>50 Ka	87ks
5.4.5.6	to J4-A2	>150 K2	200 KS
5.4.5.7	to J4-C2		200
5.4.5.9	to J4-E2		200
5.4.5.9	to J4-G2	$\downarrow$	200 V
5.4.5.10	to 34-32	>150 Ka	200 KM
5.4.5.11	34-R1 to 34-M2	> 50 143	ZOOKA
5.4.6.1.2	33-55 to 33-51	> 5 =0	<i>60</i>
5.4.6.1.3	to 34-93		<u>8</u>
5.4.6.1.4	to J4-A2		<b>*</b>
5.4.5.1.5	to J4-C2 ·	-	00
5.4.5.1.5	to J4-E2		<u>66</u>
5.4.6.1.7	to J4-G2 ·		
5.4.5.1.3	to 34-32	<u>.</u> .	00
5.4.6.1.9	J3-S5 to J4-H2	> 5 <b>c</b> C	<i>∞</i>
5.4.6.2.2	J3-V5 to J3-S1	> 5 = 2	00
5.4.6.2.3	to J4-73	1	<u> </u>
5.4.6.2.4	to J4-A2		_60
5.4.6.2.5	to J4-02		
5.4.5.2.5	to 34-E2		<u>_</u>
5.4.5.2.7	to 34-G2		<u>00</u>
5.4.6.2.8	to J4-J2	<b>V</b>	
5.4.6.2.9	23-45 to 34-42	> 5 = 67	<u>~</u>
5.4.7.1.2	J3-S1 to J4-A2	> 20 kg	87Ks
5.4.7.1.3	√ to 34-02	¥	Bbea
5.4.7.1.4	J3-51 to J4-E2	> 50 ica	Bles

75 16603 Rev B 18 December 198

#### 10.2 Ground isolation test (continued)

RET. PARA.	DESCRIPTION	LIMITS	*FASUREYENT
5.4.7.1.5	J3-51 to J4-G2	> 50 kG	87K~
5.4.7.1.6	:0 34-32	. ↓	86 KM
5.4.7.1.7	J3-S1 to J4-H2	> 50 kG	86 KEL
5.4.8.1.2	34-A2 to 34-C2	> 150 kg	200 KS
5.4.8.1.3	to J4-E2	į.	200
5.4.8.1.4	:5 J4-G2		200
5.4.8.1.5	v to 34-32	4	100K-
5.4.8.1.6	J4-A2 to J4-M2	> 150 kg	ZOOKA
5.4.8.2.2	34-C2 to 34-E2	> 150 kG	200
5.4.8.2.3	to J4-G2	1	200
5.4.8.2.4	y to J4-J2		200
5.4.8.2.5	34-C2 to 34-M2		200
5.4.9.3.2	34-E2 to 34-G2		200
5.4.3.3.3	to 34-32		200
5.4.8.3.4	J4-E2 to J4-M2		200
5.4.3.4.2	J4-G2 to J4-J2		200
5.4.3.4.3	34-62 to 34-42	¥	200 4
5.4.8.5.1	34-32 to 34-M2	> 150 kg	200 Ka

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T5 16603 Rev B 18 December 1980

10.3 Hi-pot test

QUAL OR ACCEPTANCE FINAL TESTING PHASE: , 1000 DNA OR 30V DESCRIPTION REF. PARA LIMITS MEASUREMENT 5.5.1 UUI to 118 & 11; > 1 mg 5.5.2 a) UUT to 346A > 1 mg UUT TOJ463 c) UUT tJ474 > 1 mG UUT 8473

5 Feb 82

Tester(s)